FEEDSTUFFS®

★ A WEEKLY NEWSPAPER ★

FOR THE FEED MANUFACTURER, JOBBER, BROKER and DEALER

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"Self-Help" Turkey Legislation Given Only Small Chance

WASHINGTON—The new device of the so-called "self-help" industry promotion in the farm community made itself felt here this week at a hearing of the Senate Agriculture Committee when a Kentucky turkey producer advocated approval of the industry "self-help" bill which appeared before this committee.

He charged that the chain stores were using turkey sales as an attractive loss leader in their stores at arbitrary prices. Speaking for the Kentucky Turkey Federation, E. S. McConnell of Winchester, Ky., called the poultry industry an "ideal seasonal football" for the big chain store operators who used turkeys and

(Turn to TUREKEY LAW, page 103)

10% Chick Increase Expected by USDA

WASHINGTON — The cumulative 1958 chick output will be more than 10% above 1957, with the result that the 1958-59 laying flock will be up from the year before, according to a report from the U.S. Department of Agriculture.

Based on hatchery activity before May 17, 1958, the 1958-59 laying flock was previously estimated to be about the same as in 1957.

About 7% more replacement chicks were produced through April than

(Turn to CHICK INCREASE, page 103)

Record-Equalling Total Crop Seen As of July 1; Feed Grains Strong

WASHINGTON—The U.S. Department of Agriculture this week estimated—barring the uncertainty of late-season hazards later this crop year—a total crop outturn equalling any previous year. Total acreage harvested for all crops is expected to be slightly larger than in 1957 from the smallest total planted acreage in 40 years of comparable record.

This July 1 estimate includes an anticipated corn crop of not less than 3.3 billion bushels. For other feed grain crops they estimate as follows: Oats, 1.25 billion bushels; barley, 423 million bushels, and grain sorghums, 20.5 million acres.

Feed grain production, while off from last year generally, is expected to be considerably larger than average. Other crops such as winter wheat, meanwhile, contributed to the big overall increase.

Of further interest was the soybean acreage estimate of 24.4 million acres grown alone and 23.3 million acres being grown for beans. First forecasts of production for both soybeans and grain sorghums are to be made in the August crop production report, USDA said.

Pasture feed conditions, also included in the July 1 crop report, were reported at 88% of normal as that date for the country as a whole —two percentage points less than on the same date last year, but otherwise the highest for July 1 since 1951.

Crop developments through June and in early July have been mainly favorable despite instances of local flooding or other storm damage, the report said. Yield per acre levels, all crops considered, now seem likely to pull ahead of last year's record high unless tripped by late-season hazards.

Generally, USDA said, soybean acreage is record large and growth conditions are promising. The corn crop now looks slightly smaller than last year but well above average. Large to near-average crops of barley and oats are in prospect. A sharp cut in sorghum acreage assures a

(Turn to CROP REPORT, page 103)

USDA "Stunned" by Its Own Feed Grain Crop Estimates

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — The July feed grain crop estimate by the U.S. Department of Agriculture adds confirmation to a conclusion that has now been reached by USDA. It is that there is no limit to grain production in the U.S.

This is to say that the available disposal devices of the government are ineffective, and until there is some effective check on the production side the nation will continue to pile up surpluses far in excess of demand, making grain storage a "treasure chest" for the storage industry and add to the taxpayers' burden for such costs to USDA.

Of immediate interest not only to Ezra Taft Benson, secretary of agriculture, his staff and his opposition is the opening statement of the USDA crop reporting service which says, "Total crop outturn equalling any previous year now appears likely for 1958. Total acreage harvested for all crops is expected to be slightly above that in 1957 from the smallest acreage planted in 40 years of comparable record . . . yields per acre, all crops considered, now seem likely to pull ahead of last year's record unless tripped by late-season hazards."

This crop report can do nothing

(Turn to CROP COMMENT, page 103)

Spot Soybean Meal Hits 5-Year High

The soybean meal market, described as "a sizzler" by meal processors this week, is expected by some processors to sizzle on through the remainder of the crop year.

"Most processors are sold out through August," one processor said this week. "We've been offering first half September, but haven't had any takers." The processor was quoting a first half September price of $62, bulk, Decatur.

Another processor, however, was taking a more cautious look at the market.

"I think meal will be tight only until the middle of August," he said. "The recent upswing in prices is the result of several factors. First of all, the animal and fish proteins have been in short supply. This increased use of soybean meal. Added to this was a good, strong feed demand.

"There has also been a change in the production pattern. Demand for 50% soybean meal has been on the increase, and the yield of 50% meal

(Turn to INGREDIENTS, page 103)

Passage of Senate Farm Bill Expected Without Changes

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—The Senate farm bill will be up for debate next week in the Senate. Provisions of the bill are relatively simple, unlike the House omnibus bill which was rejected, even for debate, by the House.

The Senate bill is primarily a cotton bill designed to liberalize cotton acreage for the next few years. This feature has virtually unanimous support on both sides of Congress, at the U.S. Department of Agriculture and at the White House.

The need of cotton acreage relaxation of statutory restrictions may clearly be found in the cotton production report this past week showing that the little more than 12 million acres for that crop on an average yield basis will produce little more than 9.5 million bales. This is hardly sufficient, on the basis of staple length yields, to meet both domestic and export requirements.

This estimated yield of cotton for the current crop indicates that there will be a deficiency of cottonseed meal and cottonseed oil for ordinary domestic requirements.

The Senate bill which was first slated for discussion by the Senate this week was carried over until next week. This means that debate on the Senate farm bill will start July 14,

(Turn to FARM LAW, page 107)

FEEDSTUFFS *Features This Week*

DAIRY MARKETING: Striking changes in the production and marketing of dairy products are described on **page 14.**

BROILER RATIONS: Feeding tests in which 1 lb. of bird was produced with slightly more than 1 lb. of feed are reported on **page 18.**

PLANT EFFICIENCY: A Kansas feed plant reduces crew, doubles output and triples efficiency. **Page 28.**

FEEDER FINANCING: A bank president discusses feeder financing in today's changing agriculture. **Page 32.**

EGG PRODUCTION: A possible bright future for the Midwest egg industry is suggested in an article on **page 64.**

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Broiler Prices Fade; Egg Set Reduced 3% From Previous Week

SALISBURY, MD. — Hatcherymen across the nation cut back their egg set last week as broiler prices weakened. The egg set was 46,578,000, or 3% less than the previous week. However, at this rate it was still 20% ahead of the same week a year ago.

Prices last week in Delmarva averaged 21.1¢ lb. on the farm. This was slightly less than the previous week when the price was 21.72¢, and not nearly as impressive as last year's 22.26¢ for the same week.

Decreases in egg set from the previous week were reported in all but four of the 22 reporting states. The sharpest declines from the previous week occurred in Pennsylvania, Texas and Indiana.

Hatcherymen in the 22 states placed 34,699,000 chicks (see table, page 108). This was 2% less than the previous week but 19% above the corresponding week a year ago. All

(Turn to BROILERS, page 106)

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A Measure of Maturity

IT BECOMES INCREASINGLY clear that while production methods in the egg business will continue to push forward to new levels of efficiency, it is quite likely that changes in marketing patterns in the next several years will have an equal or perhaps greater impact on the way poultrymen and feed men operate.

This observation is one of the most salient points made in an article on the future of the Midwestern poultry industry by Dr. R. L. Kohls of Purdue. Adapted from a talk he made at the University of Massachusetts, it appears on page 64 of this issue.

Says Dr. Kohls: "Technologically, the fences are down. No region will have an automatic advantage because of superior breeding, feeding or management. It is estimated that Midwest freight rates to the East are about 2-4¢ doz. The developing commercial flock enterprises of the Midwest can take this added charge and still supply eastern markets with high quality eggs at a comparative profit.

"EGG QUALITY will be up sharply with the above development. As the next decade progresses, quality will not be the main problem of the midwestern area. Instead the problem will be one of finding ample outlets for a quality product.

"Marketing arrangements will receive increasing attention. Midwestern producers are demonstrating considerable open-mindedness about new channels and new arrangements. Seeing the integrated broiler industry slip from their grasp had its impact. The knowledge that no area automatically is the favored area has opened a lot of eyes.

"Less and less of the surplus eggs will move 'unattached' into major consumer centers to compete directly with local supplies. Advance sales contracts, integrated producer-seller operations, direct retail acquisitions—all will be experimented with."

Dr. Kohls likens the midwestern egg industry to a gangling adolescent at this stage of its development. He expresses confidence, however, that before too long the adolescent will be shaving every day.

EGG PRODUCTION and marketing operations are growing up rapidly in other areas, too, which is a reason why midwesterners dependent on sales of eggs or sales of feed for laying flocks will be pushing harder on improved marketing plans that stress built-in quality and reliable, steady outlets.

Another experienced observer of marketing trends provides an example of developments in the egg business outside of the Midwest. A. William Jasper, recently a professor of marketing at Cornell University and now affiliated with the Poultry & Egg National Board, reports following a recent trip to Georgia that commercialization of that state's egg industry is reaching a point where before very long producers there will be in a surplus producing position. Right now, he says, Georgia producers turn out 90% of the state's egg requirements. He adds that some North Georgia broilermen are shifting to layers or started pullets as South Georgia expands broiler production. Where, he asks, will the midwestern eggs that have been going to Georgia be marketed? And, how long will it be before Georgia poultrymen are looking for out-of-state markets?

Commercialization of Georgia's egg industry has all come since 1950, with many egg producers getting their start during the last five years. Some have operations with 10,000 to 20,000 or more layers, and Dr. Jasper reports visiting one farm with a capacity for 150,000 hens.

WHETHER DEALING in terms of an old but still growing up egg-producing area or a relatively younger area, more of the potential development problems will involve improved marketing arrangements. Some of these will be highly integrated plans, but there are also indications that some other types of streamlined methods of getting eggs from farms to tables can work out well, too.

The Wall Street Journal recently published an estimate that about 20% of the nation's 290 million laying hens are in integrated flocks of one sort or another, compared with practically none a few years ago.

One of the earliest lessons learned by feed companies in working out financing plans with broiler and turkey producers was that market outlets must be assured, avoiding hit-or-miss, chancy arrangements. The egg industry is having the same experience as it gets older and wiser.

A FEEDSTUFFS FORMULA FEEDS: HOW'S BUSINESS? FEATURE

Feed sales continued at a relatively strong pace through the past week, but reports indicated that July volume is off from June. Business is still good, according to the reports, but the pressure is down slightly. Continued excellent feeding ratios make good feeding programs attractive, and the nation's manufacturers are enjoying a good volume of poultry, turkey and hog feeds. There is some concern, however, that broiler prices may skid to a point where demand for formula feed will fall off. The index of feedstuffs prices climbed to 86.3 this week, compared with 85.6 the previous week and 76.6 the same week a year earlier. The feed grain index, reflecting lower corn prices, dropped to 71.4, compared with 73.1 a week ago and 74.8 a year earlier. (Ingredient price details on pages 104-106.)

Northwest

Demand for formula feeds continued at a very good pace this week although some mill representatives reported that the pressure is not as furious as it was in June.

"We're getting near the end of the starter season," one representative said, "and although we don't have the severe seasonal fluctuations we used to have, you can still feel it."

Demand is good for all lines of feed with hog feeds continuing as the leaders. Poultry and turkey feeds are also moving well as the birds increase their consumption.

Resistance is still a source of worry for the manufacturers. Prices are at a point where the farmer may soon hold back, they claim. One representative said, however, that the feeders understand the higher prices soon enough when it is pointed out that "You don't get cheap tankage when hogs are 25¢."

Running time varies quite sharply with a range of from one shift to around-the-clock production.

Prices are expected to be up about $1 a ton on high protein feeds next week.

Southwest

Sales activity in formula feeds accelerated in the Southwest this week for most mills. The busier pace was partly attributed to the July 4 holiday that reduced volume last week and pushed it into this week. Livestock in the fields were plentiful and favorable feeding ratios were encouraging the use of formula feeds. The over-all tone was optimistic as farmers completed bumper wheat harvests and looked into ways of doing more with their money in the livestock industry.

Turkey and hog feeds were two of the best moving lines. Turkeys are growing, and so are their appetites. More turkeys are on complete feeds this year than last, a trend that has brought increased tonnage. Feeding ratios for hogs continued to be favorable and farmers were taking advantage of the situation by feeding larger numbers of hogs and feeding them good rations.

Chick starter business was dwindling, but the decline was accompanied by a better volume of grower feed. Laying feeds were moving fairly well. So were broiler feeds, although some mills looked for a tapering off of that business as the prices follow downtrend.

Cattle feed demand was improving slightly, but the total volume was not a big factor in the business pace. Several mills noted that dairy feed sales improved slightly this week.

Running time ranged from 5 to 7 days, with most mills operating two shifts. Order backlogs ranged from fair to good. Price lists are expected to be unchanged to up 50¢ to $1.50. Protein feeds will take the maximum increases with strength in both animal and vegetable protein evident.

Northeast

Egg prices in the Northeast remained steady, with a slight price rise for smaller sizes. Broiler prices held about steady. Prices ranged 19½ @22¢ lb.

Egg mashes continued to lead sales, with broiler feeds and growing feeds following.

Running time of the mills last week was four days because of the holiday, and this week it looks as though the mills again will run no more than four days.

Molasses was unchanged, and animal fats were firm. Soybean meal was robust, with prices holding well. Cottonseed meal was unchanged, and gluten was up $2. Linseed oil meal gained 50¢ ton. Meat scraps jumped $10 from last week. Fish meals held firm because of the poor fishing season so far this year.

Bran was down $1 and middlings down $2. Running time of flour mills was rated at capacity.

Southeast

Feed business in the Southeast continues at a good pace, with feed mills reporting running time good to very good. Although broiler prices have weakened materially during the week and most of the trade expects still lower prices, this is not expected to affect feed demand in the immediate future due to the large number of chick placements during recent weeks which must be fed out even though the number of replacements will probably decrease during the coming weeks.

Feeders are complaining about high feed costs, particularly of broiler feeds which most manufacturers report have been advancing steadily during recent weeks. Most sellers blame the increased cost to the rapidly rising prices of soybean meal which has run the producing cost up to present levels.

There is some talk circulating that broiler prices are expected to go to as low as 12¢ lb. While this is the extreme low figure mentioned, and while some of the trade doesn't expect prices to decline so drastically, almost everybody seems to feel that with declining broiler prices feed costs will of necessity have to decline during the coming months.

In fact, in certain instances, some feed manufacturers have offered or tentatively offered to sell for August shipment some of the feed ingredients which they had previously booked for use in manufacturing feeds. They now feel that they are overbought should the feed business drop off as expected.

Pastures are reported to be in

(Turn to MARKETS, page 109)

Seldom mentioned - always present

the need for FLAVOR in feed

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Layer Numbers Up Slightly, Egg Records Topped

WASHINGTON — The number of layers on farms on July 1 was 277.6 million, the U.S. Department of Agriculture has reported. This compares with 277.1 million a year ago that date.

Compared with last year, increases were 4% in the east north central, 3% in the West and 1% in the north Atlantic states. Numbers were about the same in the south Atlantic states, but were down 5% in the south central and 2% in the west north central states.

Laying flocks averaged approximately 280.4 million layers during June—1% less than in June, 1957. The rate of egg production per bird during June was 17.9 eggs, a record high for the month compared with 17.7 eggs in June, 1957 and the 1947-56 average of 16.6 eggs. May also went on record this year as being the highest for that month at 19.3 eggs.

Farm flocks laid 5,031 million eggs during June—1% more than during June, 1957. The total for May of this year was 5,543 million. June egg production, however, was above last year in all regions except the west north central and south central. Total egg production, January through June, 1958, was still 3% below the same period last year. The rate of lay on July 1 was 58.1 eggs for each 100 layers on farms, compared with 57.3 eggs on July 1 a year ago.

Prices received by producers for eggs in mid-June averaged 33.9¢ doz., compared with 35.5¢ a month earlier and 28.9¢ in June last year. With higher egg prices at the end of the month, breaking operations were curtailed.

The average cost of the farm poultry ration in mid-June was $3.48 cwt., compared with $3.51 in May and $3.48 in June, 1957.

ADA Publishes Nutrition Abstracts

KANSAS CITY — The American Dehydrators Assn. has announced a new service for feed nutritionists. The association will publish at regular intervals abstracts of literature pertaining to the use of alfalfa in feeds.

According to an announcement from the association, the nutrition abstracts are being published for the convenience of feed nutritionists in keeping abreast of recent research in the use of dehydrated alfalfa in poultry and livestock feeds.

The ADA has since 1949 published alfalfa abstracts pertaining to production, harvesting, composition and uses. These are mailed to college and industry people interested in various phases of alfalfa research.

CORRECTION

Mill Fire Was Firm's First—Not Third

A news story in the May 24 issue of Feedstuffs incorrectly reported that a fire which destroyed the mill of James G. Blodgett Co., Inc., Canadaigua, N.Y., was the third serious fire at the mill since Dec. 14, 1957.

James G. Blodgett, president of the company, states that the fire was the first in his 30 years of business.

Two previous fires in the vicinity of the mill, one at a hotel and the other at a house, had occurred in Canandaigua in the past several months. A report forwarded to Feedstuffs by a correspondent incorrectly linked these unrelated happenings to the mill fire.

The fire at the Blodgett mill was reported to have caused loss of more than $200,000.

Feedstuffs regrets the error.

Charles C. Dawe

BOARD CHAIRMAN — Charles C. Dawe, operating head of Dawe's Laboratories, Chicago, since he founded the firm in 1926, has moved up from the post of president of the company to chairman of the board. In a recent election of officers (Feedstuffs, July 5), Vernon Dawe, formerly executive vice president, became president and Sam Tepper, formerly vice president in charge of production, became executive vice president.

Du Pont Offers New Methionine Product

WILMINGTON, DEL. — A new methionine product to be introduced next week by E. I. du Pont de Nemours & Co. will permit reductions of 25 to 30% in the cost of methionine supplementation of feeds, according to a company announcement.

The new product, "Hydan," will offer savings in costs as a result of a more economical manufacturing process for methionine hydroxy analogue calcium, the methionine component of the product, DuPont says.

Du Pont introduced DL-methionine in 1952, and a second source of methionine activity, methionine hydroxy analogue calcium, was introduced in 1957.

The synthetic analogue of methionine has proved to be an efficient source of this essential amino acid, Du Pont says. "Where methionine is the only major deficiency in otherwise well-balanced rations, both Hydan and the amino compound, DL-methionine, are completely effective in improving the amino acid balance of the protein," the company reports. "Research evidence also indicates that analogue preparations of methionine are more easily metabolized by poultry than DL-methionine."

The new supplement will be sold through distributors, and Du Pont will continue to assist feed manufacturers in developing feed formulas with methionine supplementation.

"The practical value of this research and the commercial value of Du Pont methionine come from the modern trend toward higher energy rations for poultry feeding," Du Pont says. "Methionine is one critical nutrient which is most likely to become deficient as calorie content is increased."

Washington Feed Firm Purchased by 2 Men

OLYMPIA, WASH.—Ron Harvey, resident manager for Albers Milling Co. in Lyden, Wash., for eight years, and Art McKinney, resident manager of Albers in Bellingham, Wash., have purchased the entire milling operation of the Olympia Feed Co.

They will manufacture Olympian brand feeds and will carry a terminal mill brand flour.

Continued Canadian Drouth Causes Acute Shortage of Roughage Feed

WINNIPEG—Livestock will be on short rations in Saskatchewan and large sections of Manitoba this winter as far as fodder and straw are concerned because of drouth, according to a report from that area.

The report said livestock is on short rations now, as much of the pasture and range land is so bare of vegetation that it no longer sustains grazing. Many farmers are supplementing ample feed with grain.

There is ample grain in western Canada for livestock feed. Fodder and straw are the scarce items. Stands of grasses, legumes and short thin crops that would not normally be cut are being salvaged for feed.

The drouth swept over Saskatchewan and Manitoba with the beginning of spring. It was broken in Manitoba in the closing days of June but continues over most of Saskatchewan with only scattered points in that province benefiting from rains and thunderstorms.

There is also a very dry area in east-central Alberta where rains are badly needed.

Manitoba, however, was blanketed with the best general rain in 10 years in the last two days of June and the first week of July. In some areas pastures are staging a comeback but large quantities of fodder will still be required.

In Manitoba the provincial department of agriculture is now surveying the feed situation. J. F. Muirhead, coordinator of an emergency fodder program established this week by the provincial government, reports that a large supply of hay will be available on government-owned land in various parts of the province and will be leased to farmers by means of hay permits.

Manitoba agricultural representatives, working with this emergency team, are already out surveying the countryside, listing hay supplies and noting farmers' requirements.

Another survey is being carried out in Minnesota and North Dakota, and already farmers have contracted for hay in those two states. Unofficial estimates indicate about one third of Manitoba farmers will have enough hay and straw for their livestock, another third can scrape by and the other third needs help.

In Saskatchewan the story is vastly different. All types of hay are in very short supply and it is doubtful if 15% of the livestock producers will have enough hay and straw to carry their herds through into 1959. However, there has been no major move in this province to liquidate livestock.

Government officials in Saskatchewan are also looking for feed, and appear confident that roughage feed for livestock will be found outside the province.

In Alberta the picture generally is satisfactory. On the whole there will be adequate feed for livestock with the possibility of a fair surplus in some areas. Wild hay for the most part is poor, but tame hay and legumes are yielding fairly well.

INTEGRATED LAYERS ESTIMATED AT 20%

NEW YORK—An estimate that one fifth of the nation's 290 million laying hens are now in flocks which have some degree of "integration" is made by the Wall Street Journal in an article, "The Egg and You," appearing in the July 3 issue. The article sets broiler integration at 90%. According to Fred Stannard, Jr., staff reporter who wrote the article, this includes cooperative poultry raisers' association marketings. "If the present enthusiasm for this type of farm system continues," Mr. Stannard writes, "a lot of new (integration plans) are likely to hatch in the years ahead."

Government officials in Ottawa have recognized the seriousness of the drouth. Discussions are already taking place with provincial ministers of agriculture. Indications are that the Canadian government will assist in the feed program, but plans have not yet been finalized.

Central Soya Company Buys Grain Terminal Facilities in Alabama

FT. WAYNE, IND.—Central Soya Co., Inc., Ft. Wayne, has purchased the grain terminal facilities of the Norris Grain Co., Guntersville, Ala., according to an announcement by Robert B. Parrott, vice president of Central Soya grain merchandising.

Managing the company's Guntersville facilities, to be known as Central Grain Co., Inc., of Alabama, will be Charles Schoocraft, resident manager; Carter Hulsey, assistant resident manager; Ed Mayo, elevator superintendent; Bill Taylor, office manager, and Curt Edmonds, foreman.

Mr. Parrott stated, "This storage unit with a 250,000-bu. capacity complements the company's existing terminal facilities at Chattanooga, Tenn., and Red Wing, Minn., and will increase our marine transportation facilities on the inland waterway system.

"The Guntersville terminal includes both concrete and steel tank storage, and is completely equipped for grain merchandising. A marine elevator leg and conveying equipment allow loading and unloading of grains moved on the inland waterway. Existing facilities will also permit the handling of inbound truck shipments and outbound truck or rail distribution.

"The terminal will serve as a market for the surplus grains grown in the area; and as a source of supply for the expanding poultry and livestock industries in the surrounding region."

Hales & Hunter Mill Remains Shut Down

CHICAGO—The feed manufacturing plant of the Hales & Hunter Co., Chicago, remains shut down following a strike which started June 30. Up to July 9 efforts of mediators to effect a settlement were without results. Thomas H. Kelley, director of personnel for Hales & Hunter, said there was some hope that a meeting between the firm and union officials could be arranged for later this week.

Last week (Feedstuffs, July 5, page 1) Local 718 of the International Brotherhood of Teamsters struck the Hales mill and broke off negotiations. Settlements were made with two other local mills, the A. E. Staley Mfg. Co. and the Farm Bureau Milling Co. Agreement on wages were reached with Hales & Hunter, but the union objected to certain management factors, including anticipated installation of some automatic equipment which would reduce the number of workers.

Hales & Hunter customers are being serviced through arrangements with other feed manufacturers, company spokesmen say, and officials hope the dispute soon can be settled and operations get back to normal. The union thus far has refused arbitration by the Federal Conciliation Service.

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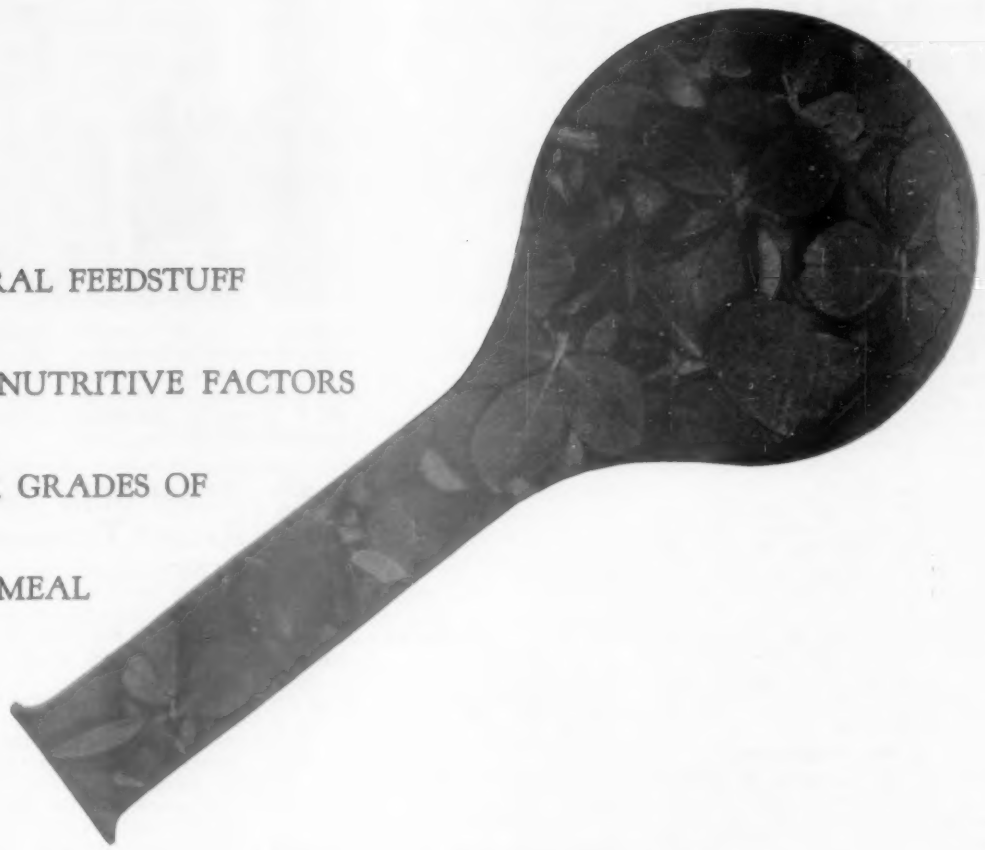


PROTEIN

ALPHA-TOCOPHEROL (VITAMIN E)

RIBOFLAVIN

CAROTENE (PRO-VITAMIN A)

PANTOTHENIC ACID

CHOLINE

VITAMIN K (PHTHIOCOL)

XANTHOPHYLLS

ANTI-GIZZARD EROSION FACTOR

BIOTIN

NIACIN (NICOTINIC ACID; P-P FACTOR)

VITAMIN C

FOLIC ACID (INCLUDING FOLIC ACID CONJUGATES)

PLUS THESE IMPORTANT ELEMENTS:
Calcium, Phosphorus, Magnesium, Sodium, Chlorine, Potassium, Sulfur, Silicon, Iodine, Manganese, Iron, Copper, Cobalt and Zinc.

"LAGNIAPPE"

In old New Orleans, when you made a purchase, the merchant used to toss in something free—and this extra value was called "lagniappe." Today, feed manufacturers who buy dehydrated alfalfa meal for its carotene and protein content get lots of "lagniappe"—*extra* nutritive factors that cost money in the open market. These *extra values* are yours when you buy dehydrated alfalfa meal from a reliable source with a dependable record of performance.

FOR FEEDS WITH A FUTURE
Small's
DEHYDRATED ALFALFA MEAL

ARCHER-DANIELS-MIDLAND COMPANY
Alfalfa Division
P.O. Box 356 Kansas City 41, Missouri

Threat to Position Of Buffalo Made By Toledo Plans

BUFFALO—The first open threat to Buffalo's position as a world milling center when the St. Lawrence Seaway opens has been made at Toledo, Ohio.

The Toledo-Lucas County Port Authority has disclosed plans to build storage facilities for 8 million bushels grain. These facilities will be leased for long terms.

The Continental Grain Co., owners of a 4½-million-bushel elevator here, submitted a bid to lease facilities for 3 million bushels. The Andersons of Maumee, Ohio, bid to lease facilities for 5 million bushels.

The authority said acceptance of the bids is subject to acquisition of a 14-acre site from the Wabash and New York Central railroads. The property is on the west bank of the Maumee River.

Niagara Frontier Port Authority officials said Continental's move for additional space will "spur interest" to create facilities here to maintain Buffalo's position.

Stiffer Competition

The Toledo announcement declared competition will be stiffer in the future among Great Lakes cities in the grain storing and transport business.

"The facilities . . . when compieted will greatly augment (Toledo's) grain handling capacity, and with the opening of the seaway, can be expected to attract substantially more grain from a larger area of the midwest," the Toledo port board said.

Local Continental spokesmen said the move, timed to anticipate the opening of the seaway, will give the firm larger storage facilities nearer the grain-producing areas of Ohio, Indiana and Michigan. Spokesmen for the company said it is an "expansion" only and does not mean the concern is moving out of Buffalo. Continental owns the Concrete Central Elevator in Buffalo River.

Last fall, Continental formed a Cleveland, Ohio, subsidiary, the North American Marine Corp., to handle its extensive shipping operations on the Great Lakes.

Increase Sought

John A. Ulinski, executive director of the Niagara Frontier Port Authority, said Toledo has been attempting to increase its grain handling business. He said the Toledo organization plans to expand its shipping area along the Maumee River and plans to deepen the connecting channels to accommodate ships up to 27-ft. draft. The St. Lawrence Seaway is designed to handle the 27-ft. draft carriers.

Most of Buffalo's grain elevators, Mr. Ulinski reported, are in the Buffalo River and City Ship Canal which now are only 21 ft. deep. He noted that "costs would be prohibitive" to dredge the inner harbor to the seaway depth of 27 ft. Most of the channels are rock and would require expensive blasting and cutting operations, he related.

CONVENTION SPEAKERS—Speakers at the Georgia Feed Assn. convention held June 28-July 1 in Savannah are shown in these photos. In the first picture are Olen Rhodes, Marbut Milling Co., Augusta; Dr. Clyde Driggers, University of Georgia; Dr. T. J. Cunha, University of Florida, and Robert C. Woodworth, Cargill, Inc., Minneapolis. Two other speakers were (second picture, left to right), Heber Padget, Gainesville Milling Co., and Emmett Henton, Georgia Poultry Feed Mills, Dalton. Arthur Kantner (third picture), Federal Reserve Bank of Atlanta, talked on credit controls.

Feed Firm Sponsors Auction for Youngsters

BROOKVILLE, KANSAS—A feed man's ambition to give youngsters the opportunity to work with and own top-bred livestock for their club projects has been fulfilled with the annual Gooch Red Circle Auction, coming up July 25-26 at the CK Ranch, Brookville.

The event was originated and is sponsored yearly by J. J. Vanier, owner of Gooch Feed Mills.

Since the first auction seven years ago, hundreds of young people have become owners of champion-sired calves and gilts. Bidding and "buying" at the auction are done entirely without money. Only the Red Circle points that come on each bag and package of Gooch's food, flour and feed are used.

This year will mark the third achievement awards program. Through this program those youngsters who "buy" stock or sewing machines at the auction may enter the contest the following year and win awards on their progress in feeding and sewing.

This year 90 calves and gilts will be put up for bidding, together with 10 sewing machines. Youngsters from a nine-state area are expected to attend.

Allied Mills Completes Record Tonnage Year

CHICAGO—New monthly, quarterly and fiscal year tonnage records were established by Allied Mills, Inc., Chicago, at the close of June, it has been announced by Elmer W. Lenz, president.

An increase in excess of 40% over June, 1957, established a new record total tonnage year, Mr. Lenz said, making the current quarter as well as the fiscal year ending June 30 new high marks in the sale of Wayne poultry and livestock feeds.

Mr. Lenz credited the generally favorable situation in poultry and livestock production as contributing greatly to the new tonnage record, but pointed out that new and improved plant facilities coupled with an expanded sales organization, development of new and improved products through continuous research, aggressive promotion programs and splendid dealer cooperation have made these increases possible.

He predicts that the feed business will continue to expand during the coming year.

Louisiana Reports Anthrax Outbreak

BATON ROUGE, LA. — Heavy rains and floods in north Louisiana have been blamed, in part, for a recent outbreak of anthrax, reported by the Louisiana extension department.

A severe infestation of mosquitoes and various kinds of flies has also been reported.

Many of the field crops lost in the floods resulting from the heavy rains have been replanted and, barring further trouble, the extension service says good yields are still possible.

Elevator Strike Ends at K. C.

KANSAS CITY—Settlement of the Kansas City grain elevator workers' strike was reached July 4, after a four-day walkout had halted operations at 16 terminal elevators in this market. Some elevators began taking in wheat again on July 5 and the remainder on July 7. At the same time, a railroad embargo against shipments to the 16 storage houses was lifted. An estimated 5,000 cars of wheat piled up at the market during the 4-day halt in unloading.

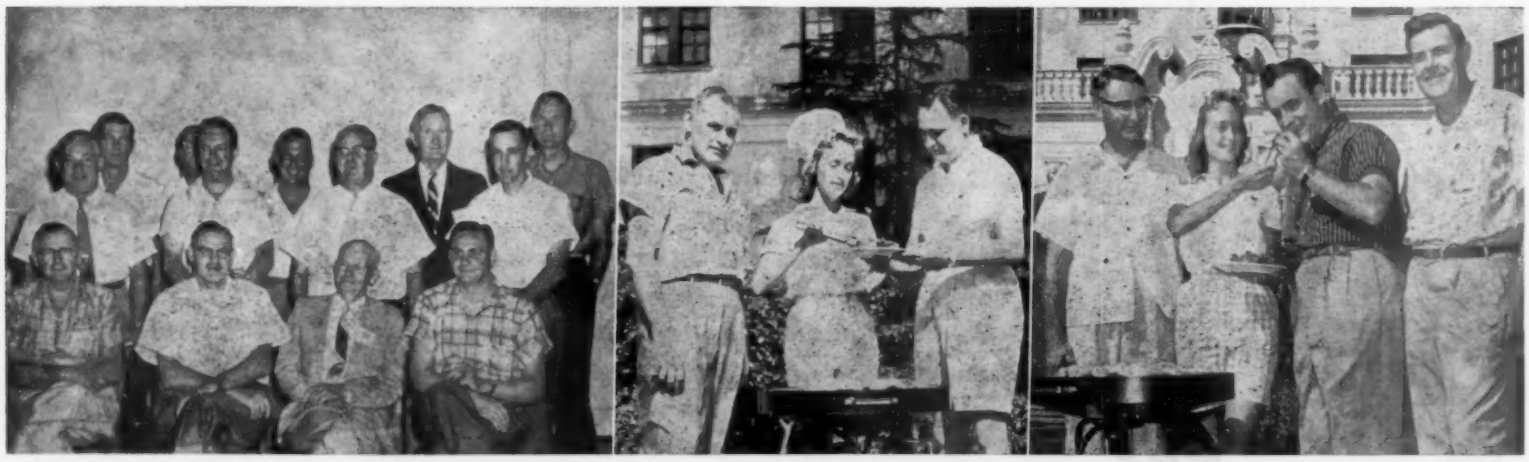
Principal points of the agreement between the elevator operators and Local 16 of the American Federation of Grain Millers were as follows:

- A wage increase of 8¢ an hour.
- A two-year contract with provision for reopening wage negotiations at the end of one year.
- An eighth holiday—Good Friday.
- Funeral leave up to three working days when a member of an employee's immediate family dies.
- A fourth week of vacation after 25 years of service.
- Health, welfare and pension programs to be opened for negotiation on an individual company basis. Some firms already have such plans.

There was no halt in the operations of the grain elevators operated by flour millers and other processors during the strike against the terminal storage plants. One terminal elevator also continued operations, since it was manned by members of another union.

FIRE DESTROYS MILL

HORSE CAVE, KY.—A midnight fire recently destroyed the W. H. Coffey & Son grain mills here. Origin of the fire was unknown. No estimate of damages was made.



GEORGIA CONVENTION—The above pictures were taken at the Georgia Feed Assn. Convention at the General Oglethorpe Hotel, Savannah, June 28-July 1. In the first picture are association directors and officers. They are (seated, left to right): C. G. Ellis, Red Comb-Pioneer Mills, Cartersville, vice president; Ralph W. Cleveland, Gainesville Milling Co., retiring president; J. O. Smith, Flint River Mills, Bainbridge, director, and Will L. Kinard, Heard-Kinard-Smith, Inc., Atlanta, secretary-treasurer. The new president, Charles Dannals, Jr., Atlanta Milling Co., was not present at the meeting. The other directors (standing, second row, left to right) are: Sherman Applebaum, Athens Milling Co.; J. B. Crew, Edward E. Smith Co., Atlanta; Harold Marbut, Marbut Milling Co., Augusta, and Dr. Ken Laurent, Marbut Milling Co. In the back row (left to right) are: A. R. Tagge, Ralston Purina, Macon; Herbert F. Birdsey, Birdsey Flour & Feed, Macon; J. C. Thomas, Adel Milling Co.; Clyde Nichols, Happyvale Flour Mills, Griffin, and C. B. King, King Milling Co., Americus. In the second picture is Miss Diane Austin, new Georgia Poultry Princess. She is flanked on the left by Mr. Cleveland and on the right by Mr. Kinard. In the third picture are (left to right): Al Fowler, Fowler-Morris Poultry Farms, Douglasville, and president of the Georgia Poultry Federation; Miss Austin; Hulan Hall, Charles Vantress Farms, Inc., Duluth, Ga., and Al Gibson, secretary of the Georgia Poultry Federation, Gainesville.

Data on Cottonseed Meal Fed Broilers To be Evaluated

NEW ORLEANS — Data accumulated in the experimental feeding of commercial cottonseed meals to broilers is to be evaluated mathematically from the standpoint of nutrition to determine the quantitative relationships between processing conditions, chemical characteristics and nutritive value of the meals.

The work will be done at the Texas Agricultural Experiment Station under a contract with the U.S. Department of Agriculture. The contract was negotiated for the USDA by the Southern Utilization Research and Development Division of the Agricultural Research Service, New Orleans.

A comprehensive nutritional experiment was conducted by a number of state, industrial and federal agencies in cooperation with the National Cottonseed Products Assn., in which cottonseed meals from a number of commercial processing plants were fed to broilers. Some 12,000 birds were used in the tests.

Cottonseed meals and mixed feeds used in the experiments were chemically analyzed and records kept of the growth of the chicks. It is planned to analyze the statistics to determine the effects of various chemical factors in the 28 rations, with particular attention to gossypol, lysine and crude fiber, to determine the correlation between these components and the nutritive value of the meals as reflected by the growth responses of the chicks.

These feeding tests were part of a research project to determine the suitability of cottonseed meals for feeding to poultry and other non-ruminants, and to develop processing methods that will produce meals suitable for non-ruminant feeding.

The analytical work will be supervised by Dr. Carl M. Lyman, head of the department of biochemistry, Texas A&M College, for the contractor, and by Dr. V. L. Frampton, head, oilseed meals investigations, industrial crops laboratory, Southern Division, for the USDA.

N.M. Lumber Company Enters Grain Business

ALBUQUERQUE, N.M.—An Albuquerque wholesale lumber company has gone into the grain business and is now building storage bins for about 100 truckloads of grain. The reason given for the move is to create extra business for the firm's delivery trucks.

The Thunderbird Lumber Co. has been delivering lumber and steel to customers in Texas, Kansas and Oklahoma, and its trucks have been returning to Albuquerque empty. Under the new arrangement, the trucks will haul milo, corn and wheat on the return trips.

Robert Gallagher, president of Thunderbird, says his firm will also buy grain from independent truckers.

The storage bins are of steel construction and will have mechanical equipment for loading and unloading trucks. These elevators are scheduled for completion in August.

Thunderbird will sell the grain to West Coast customers. It will be transported west in refrigerated trucks of other hauling firms who customarily bring fruit and vegetables east to New Mexico and often return empty to California. Paul Weber has been named manager of the grain operation.

Firm Changes Name

LELAND, ILL.—Leland Hatchery has a new name, N. Orrin Baker, president, announces. It is now known as Baker's, Inc. Mr. Baker said the company's Baker's Blended Feeds have become such a large percentage of the business, compared to the hatchery business, that it was misleading to use the hatchery as part of the company name.

E. E. Budde

E. E. Budde Heads Feed Microscopists

OTTAWA, ONT.—E. E. Budde of the Quaker Oats Co. has been named president of the American Association of Feed Microscopists. Mr. Budde, head of the analytical division of the Quaker Oats research laboratories, Barrington, Ill., was elected at the recent association annual meeting here.

More than 70 representatives of state feed control laboratories, universities, and the feed industry in the U.S. and Canada attended the AAFM's annual session at Hotel Chateau Laurier.

Activity highlights of the meeting included a day as guests of the Canadian Department of Agriculture with workshop sessions ranging in scope from the identification, microscopically, of trace minerals, antibiotics and other micro-ingredients in feeds to techniques for detecting adulterants in animal and cereal products used in mixed feeds.

AAFM members chose Quincy, Ill., as the site of their 1959 meeting.

Other officers elected by the association include Louis Barefield, head, division of microscopy, Arkansas State Plant Board, vice president, and G. M. Barnhart, chief chemist, Missouri State Department of Agriculture, secretary-treasurer.

Food & Drug Names Detroit District Chief

WASHINGTON—George T. Daughters, who has directed the Chicago district of the Food & Drug Administration for the past three and a half years, has been appointed chief of the new Detroit district of FDA.

George P. Larrick, commissioner of food and drug, also named Howard M. Bollinger chief chemist for the district.

The Detroit district is the FDA's 17th field headquarters operation and the first new district added in 24 years. The new district includes the state of Michigan and the northern parts of Indiana and Ohio. The area has been served by the Chicago and Cincinnati districts.

Mr. Daughters has been with FDA 30 years and has served as chief of the Baltimore office as well as the Chicago district. Mr. Bollinger has been chief chemist for the Los Angeles district since 1951.

Ralston Purina to Open New Mill at Memphis

MEMPHIS — Ralston Purina has announced plans for the official opening of its new mill here July 26.

Invitations have been sent out to friends and customers to attend the opening and a complimentary luncheon planned for 11 a.m. Entertainment will be provided by Roy Acuff, the Smoky Mountain Boys and Minnie Pearl.

Special Milk Program Extended by New Law

WASHINGTON—The bill extending the Special Milk Program, recently signed into law by President Eisenhower, authorizes continuation of the program for another three years, terminating June 30, 1961.

It authorizes expenditure of $75 million in each of those years for operation of the program to increase consumption of milk by children.

The U.S. Department of Agriculture will continue to operate the program, under this extended authority, in the same manner it has been operating—a system that has proved effective in increasing consumption of milk by children, a USDA bulletin says.

Preliminary figures show that, during the fiscal year ended June 30, more than 75,000 schools and institutions participated in the program, serving nearly two billion half pints of milk to children. This is in addition to milk served children under the National School Lunch Program.

The Special Milk Program encourages increased consumption of fluid milk through a system of reimbursement or incentive payments. These payments make it possible for participants to inaugurate a milk service, or to expand their current service, by offering milk at reduced prices, or by establishing new times of milk service.

Lester McAleer Joins ADM Iowa Sales Staff

MINNEAPOLIS—Lester McAleer, Independence, Iowa, has joined Archer-Daniels-Midland Co., Minneapolis, as a salesman for Archer Booster Feeds, it was announced by Raymond H. Piehl, sales manager of the feed division's northwest region.

Mr. McAleer will represent Archer animal and poultry feeds in 13 northeastern Iowa counties.

A native of Monticello, Iowa, and a graduate of Loras College, Dubuque, Iowa, Mr. McAleer has been in sales and sales management work for a number of years. Before joining ADM he was sales supervisor in Iowa, Minnesota, Nebraska and South Dakota for Consolidated Products Co.

John C. Bennett

SALES MANAGER — The appointment of John C. Bennett as sales manager of the Agricultural Division of American Cyanamid Co., New York, was announced this week by F. S. Washburn, general manager of the division. Mr. Bennett will have charge of the field selling organization as it pertains to all areas of agricultural activities. He will also be responsible for sales training. He joined Cyanamid in 1946, and has been in charge of the company's phosphates sales for the past 12 years. He is a member of the Sales Executives Club of New York.

Economist Says Cattle Prices to Remain Strong

AMES, IOWA—Cattle numbers apparently are on the climb again, but the price outlook should remain good in the next few years for two reasons, according to Tom Rackham, farm economist at Iowa State College.

One reason for continuing strong prices given by Mr. Rackham is that cattle numbers are at the highest level (94 million) from which an increase has ever started. "The overall outlook is for a gradual price-supporting expansion, rather than a speedy buildup followed by a price-killing glut," he said.

The other reason given by the economist is that the beef market is likely to be well-supported by consumer demand as herds are rebuilt. The current slowdown in marriage and birth rates has not stopped the rapid growth of U.S. population and a continuing expansion of national meat needs.

"The downswing in the cattle cycle appears to have been reversed in two years—the shortest time on record," Mr. Rackham said. "Rising prices and lush range and pasture conditions have stimulated the industry."

He said the holdback of cows that started last fall has continued. In the first quarter of 1958, cow slaughter was 16% under the same period of 1957. There has been an active demand for replacement cows.

Demand for Feeder Cattle

"At the same time," the economist continued, "the strong demand for feeder cattle has resulted in large numbers of 'two-way' and half-fat cattle going into feedlots.

"Along with the holdback of female stock, this explains why markets have had short supplies of lower grades of beef. Prices of cows and heifers on beef markets have been substantially above a year earlier, contributing to the higher price level for all cattle."

Mr. Rackham commented that the "expansionary" phase of the cattle cycle now apparently underway has been emphasized by short-term increases in inventory.

He said that in the first half of 1958, producers slowed down the rate of feeding and marketing of a large supply of cattle held on farms. These short-term withholdings created a misleading situation by adding price strength to an already rising market.

"The extra confidence that can be created in this manner leads to a boom in breeding cattle," Mr. Rackham said. "An often unwarranted upward spiral in cattle prices may follow.

"There are no indications as yet that an alarming price spiral is underway," the economist said, pointing out that such an artificial boom could be headed off by the summer liquidation of short-term cattle holdings.

Mr. Rackham said restraint in herd expansion and orderly marketings can do much to prevent both upsurges in price and sharp price reverses in months to come.

FATHER OF TWINS

MEMPHIS — James W. Phelan, manager of the commodity department for the Memphis office of Mitchell, Hutchins & Co., is the proud father of new twin daughters. Mother and twins were doing fine at the Baptist Hospital here. The Phelans have one other daughter.

MILLFEED • FEED GRAIN
FEED INGREDIENTS
What Do You Need?
—Jerry Parks
633 Board of Trade
KANSAS CITY, MISSOURI

Program Complete For American Poultry Congress

KANSAS CITY—Program details for the American Poultry Congress & Exposition were announced this week by the American Poultry & Hatchery Federation, sponsor of the annual event.

The congress will be held this year at the Public Auditorium in Cleveland on July 22-24. Committee meetings will precede the event, starting on July 19 at the Statler Hotel.

Here is the complete program:

July 22

9:00 a.m.—Registration and exhibit hall open. Entrance underground Lakeside Exposition Hall.
1:45 p.m.—First general session, North Hall. Entrance through exhibit area.
2:00 p.m.—Call to order. C. J. McAleavy, Wausau, Wis., president, APHF.
2:03 p.m.—Invocation, Charles H. Price, Telford, Pa., former president, APHF.
2:05 p.m.—"What to Do Until the Psychiatrist Comes," Dr. Murray Banks, New York.
2:30 p.m.—Ladies' Tea Room. Northeast corner exhibit hall area, refreshments, courtesy of APHF.
2:45 p.m.—"Who Sets the Price in an Integrated Market?" Dr. George L. Mehren, director, Giannini Foundation, University of California, Berkeley.
5:30 p.m.—Exhibit hall closes.
8:00 p.m.—Major league baseball, Cleveland Indians vs. Washington Senators, Municipal Stadium.

July 23

9:00 a.m.—Exhibit hall opens.
9:45 a.m.—Second general session, North Hall. George B. Scott, executive secretary, Michigan Poultry & Hatchery Federation, presiding. Musical interlude.
10:00 a.m.—Special session for participants in the APHF workmen's compensation insurance savings program.
10:35 a.m.—"Future Feed Production, Distribution Trends," a panel. Moderator, Don M. Turnbull, executive secretary, APHF. (a) In feed grain surplus areas, Dr. J. L. Krider, vice president, McMillen Feed Mills, Fort Wayne, Ind. (b) In feed grain deficit areas, Robert McLeod, president, Wirthmore Feeds, Inc., Boston.
12:05 p.m.—Men's stag luncheon and sales clinic. Air-conditioned arena of the Cleveland Public Auditorium.
12:15 p.m.—Ladies' "pullet" luncheon. Air-conditioned auditorium, tenth floor, Higbee Store. Gifts for each lady through the courtesy of APHF. For entertainment, "Theater Portraits," featuring Richard Corson.
1:00 p.m.—"Sales Motivation." Gary Garipey, president, Sales Training International. Session will conclude by 2:15 p.m.
3:00 p.m.—APHF board of directors' final session, Hotel Statler. Election of officers and selection of 1960 exposition site.
5:30 p.m.—Exhibit hall closes.

July 24

9:00 a.m.—Exhibit hall opens.
9:45 a.m.—Third general session, North Hall. Bruce Davisson, executive secretary, Ohio Poultry Improvement Assn., presiding.
10:00 a.m.—"A New Approach to CRD Prevention," Dr. E. H. Peterson, D.V.M., Professor of Pathology, University of Arkansas, Fayetteville.
10:30 a.m.—Ladies' Tea Room, Northeast corner exhibit hall area, refreshments.
10:45 a.m.—"Can We Advertise Away Our Troubles?" Dr. Richard Kohls, Department of Agricultural Economics, Purdue University, Lafayette, Ind.
1:45 p.m.—Final session North Hall. Emil Malinovsky, extension poultry specialist, Ohio State University, Columbus.
2:00 p.m.—"Report to the Membership," APHF executive officers.
2:00 p.m.—Ladies tea room, northeast corner of exhibit hall area, refreshments.
2:25 p.m.—"Hatchery & Feed Merchandising Awards," Ray Bates, editor, Hatchery & Feed Magazine, Mt. Morris, Ill.
2:30 p.m.—"Risks and Opportunities in Started Pullets," a panel. Ray Dankenbring, dairy and poultry editor, Farm Journal, Philadelphia, Pa., moderator; Robert C. Cobb, Cobb's Pedigreed Chicks, Concord, Mass.; W. K. Moore, Kazmeier - Sherrill Hatchery, Byran, Texas; Dr. Jonathan Tobey, poultry specialist, Quaker Oats Co., Shiremanstown, Pa.; John P. Weeks, director of research and education, Cosby-Hodges Milling Co., Birmingham, Ala.
4:45 p.m.—Exhibit hall closes.
6:30 p.m.—"Rainbow Banquet," Hotel Carter, all seats reserved. No speeches, one-hour stage show, two hours dancing and games with prizes.

Special entertainment for children is being aranged by APHF, including a theater party at 1:15 p.m. on July 22 and a sight-seeing tour at 9:45 a.m. on July 23.

Ralph J. Crawford

C-G-F Grain Names New General Manager

TOPEKA, KANSAS—The appointment of Ralph J. Crawford as general manager of the C-G-F Grain Co. was announced this week by H. Bernerd Fink, managing partner of the firm which operates grain storage facilities with the largest total capacity of any in the U.S.

Mr. Crawford, who has been with the Continental Grain Co. for the past 19 years, will take over his new duties Sept. 1 at the company's general offices in Topeka.

With construction now in progress, the C-G-F Grain Co. will have a total of 115 million bushels of grain storage capacity in Kansas, Nebraska and Texas.

The Topeka storage capacity will be 23 million bushels about Aug. 1 when a new 5.5 million-bushel concrete bin addition is completed. In Wichita, total capacity will be 25 million bushels when the 5-million-bushel addition is completed sometime in September. Salina will also have 25-million-bushel capacity by Sept. 1 when the 6.5-million-bushel structure is finished. In Lincoln, Neb., the C-G-F capacity is being increased 3 million bushels to 14 million. In Atchison, Kansas, the company is adding 2,250,000 bu. to its Missouri River facility to bring its total there to 13 million. And in Ft. Worth, Texas, the recent completion of 7 million bushels in concrete tanks has given that point a total space of 15 million bushels.

Managers of these various elevators are David E. McKee at Topeka, John Johntz at Wichita, Don Millikan at Salina, Wallace M. Neil at Lincoln, W. F. Allison at Atchison and W. E. Armstrong at Ft. Worth.

A possibility of further C-G-F expansion has been noted by R. H. Garvey, senior partner of the company. In the event present facilities prove inadequate for storing future crops, the company will consider building more storage space, he said.

Mr. Crawford has spent most of his business career in the grain business. Most of the period with Continental has been spent in the Kansas City division, except for 2½ years as comanager of Continental's Norfolk, Va., elevator. He has been manager of the country elevator activities of Continental in the Southwest for the past several years. Prior to his appointment to that post, he was an assistant to the head of the country division. He was named an assistant vice president in 1951. Before joining Continental, Mr. Crawford was in the country elevator department of the Farmers' National Grain Corp.

New Zealand Imports Sent to East Coast

SAN FRANCISCO—The largest single shipment of New Zealand lamb to the U.S. was made recently to the East Coast.

The shipment, comprising 20,000 carcasses, was the result of negotiations carried on in this country last January and February. Price paid for the lamb was considerably above United Kingdom prices.

During the first six months of the 1957-58 season, 14,681 tons of New Zealand beef, mostly boneless for manufacturing purposes, were shipped to this country. Additional shipments are expected to bring the total to considerably more than the 20,300 tons sent last season.

Negotiations are underway for the shipment of 50,000 head of live New Zealand cattle to the U.S. by a Hawke's Bay firm.

Alfalfa Plant Manager, W. Harley Vance, Dies

DUNBRIDGE, OHIO—W. Harley Vance, 43, Dunbridge, died July 4 after suffering a heart attack while working on the lawn at his home.

Born in Caball County, West Virginia, Mr. Vance lived in Dunbridge most of his life. He was employed as manager of the Cygnet, Ohio, plant of the National Alfalfa Dehydrating & Milling Co., Toledo.

Surviving are his widow, Opel; three sons, a daughter, a stepson, his mother and two sisters.

ST. JOSEPH HOG GRADING SCHOOL—Meat type hog production is getting concentrated emphasis at the St. Joseph, Mo., stockyards through weekly one-day hog grading sessions for central market hog salesmen like the group pictured above. According to Kieffer R. Lehman, director of the St. Joseph Market Foundation, the quality market swine program is based on a plan of buying hogs on estimated lean primal yield. Each Wednesday, 30 hog salesmen estimate the cut-out values of a lot of live hogs and follow up the next day to check their estimates with the actual percentages after the hogs are slaughtered. The St. Joseph market recently began receiving hogs on this primal yield basis under a quality-bonus program initiated by the Quaker Oats Co. and Armour & Co., a major meat packer. (Feedstuffs, June 21.)

TRADEMARK—Staley Milling Co., Kansas City, has placed a new emphasis on the "Professional" trademark which has been in use for some time by the company. An illustration is this bag of Pig Mama, a brand name long used by the firm for its sow ration. The U.S. Supreme Court recently refused an appeal by the firm in the Staley trademark suit. The refusal closed a dispute which started in 1951 between Staley Milling Co. and the A. E. Staley Mfg. Co., Decatur, Ill.

Nopco General Offices Moved to Newark, N.J.

HARRISON, N.J.—Nopco Chemical Co. and its subsidiary, Metasap Chemical Co., has moved its general offices to 60 Park Place, Newark, N.J. The new headquarters will accommodate the firm's executive, accounting, advertising and sales departments.

The transfer to Newark will now provide more facilities in Harrison for Nopco's expanded laboratory activities, a company announcement said. The firm's engineering, legal, production, purchasing, receiving, and shipping departments will also continue to operate at the Harrison plant.

Nopco, which recently celebrated its 50th anniversary, produces industrial processing chemicals for a wide range of industries including paper, leather, textile, paint and plastics, as well as vitamin products for the dairy and feed and pharmaceutical industries.

Oilseed Meal Futures Generally Firm

MEMPHIS, TENN.—The oilseed meal futures market remained firm on the Memphis Board of Trade during the past week, although declines were registered July 8-9.

The setbacks came as the cash oil meal market showed some signs of losing some of its strength, and the appearance of more meal. The futures boards had advanced on good cash demand and mixed feed business.

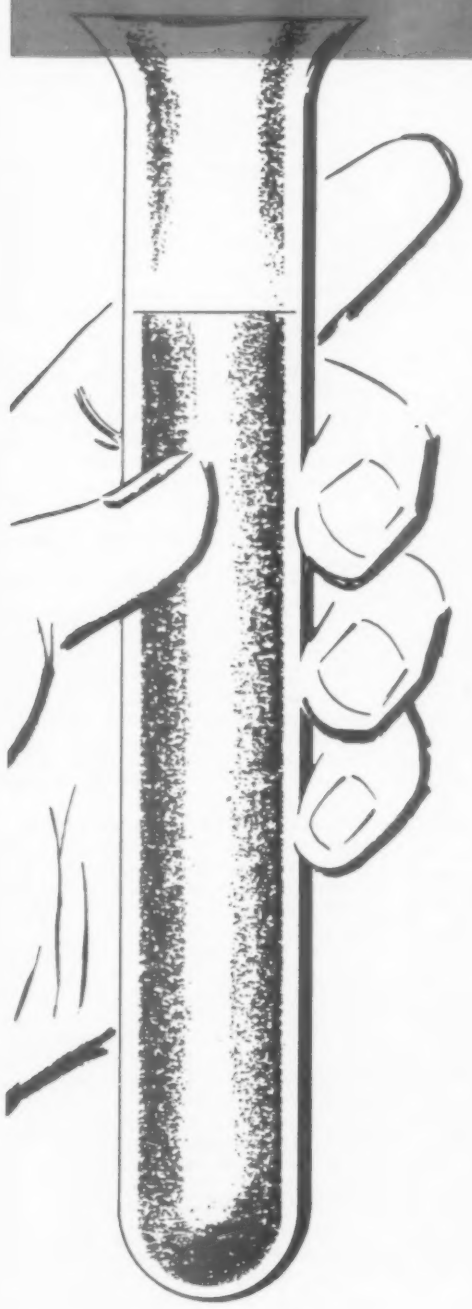
Unrestricted soybean oil meal closed July 9 15¢ lower to $1.60 a ton higher than on July 2, Eastern Trunk Line soybean oil meal 25¢ lower to 75¢ higher, bulk solvent cottonseed oil meal 25¢ to $2 higher and sacked cottonseed oil meal unchanged to $1 higher.

Trading for the period, shortened by the July 4 holiday, amounted to 5,500 tons of unrestricted soybean oil meal, 100 tons of Eastern Trunk Line soybean oil meal and 1,000 tons of bulk solvent cottonseed oil meal.

NAMES NEW MANAGER

HUTCHINSON, MINN.—Reuben Jacobson, formerly assistant manager of the McCabe Elevator here, has been named manager to succeed Marvin Roberts, manager for the past two years. Mr. Roberts has resigned.

ARE ALL DEFLUORINATED PHOSPHATES ALIKE? ...not by a long shot!



CHEMICALLY, CDP is an ortho phosphate, free of pyro and meta phosphate. It is predominantly in the form of alpha tricalcium phosphate—insoluble in water—readily soluble in dilute acid solutions—non acidic.

SOLUBILITY COMPARISON OF CDP WITH OTHER DEFLUORINATED PHOSPHATES

PRODUCT	SOLUBILITY IN 0.4% HCl	SOLUBILITY IN 2% CITRIC ACID	SOLUBILITY IN NEUTRAL AMMONIUM CITRATE	AVERAGE TOTAL SOLUBILITY
CDP	**100.00%**	**87.14%**	**86.16%**	**91.10%**
Product A	96.48%	51.19%	19.41%	55.69%
Product B	82.79%	38.61%	9.08%	43.49%

Chemical solubilities determined by TERMINAL TESTING LABORATORIES, INC., Los Angeles 23, California

PHYSICALLY, CDP is free-flowing—light tan in color—non-hygroscopic—not affected by long storage.

CDP is derived from natural Florida phosphate rock—by a high temperature calcination process resulting in removal of the fluorine and conversion of the phosphorus to the highly available alpha tricalcium form.

GUARANTEED UNIFORM ANALYSIS

Phosphorus	Calcium	Fluorine
17.0% min.	34.0% min. 36.0% max.	0.17% max.

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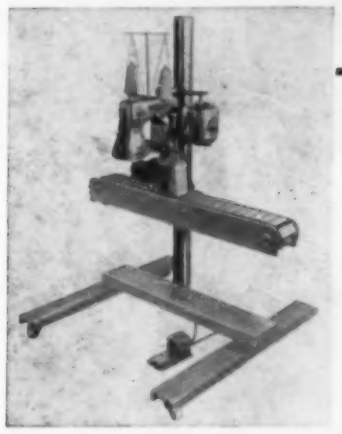

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BROKERS IN FEED INGREDIENTS

Suggests Keeping Hens in Laying Flocks 22 Months

EAST LANSING, MICH.—Poultrymen in the egg production business may be able to boost profits by going to a multiple hatch system. This is the opinion of Dr. Dean E. McKee, agricultural economics researcher at Michigan State University.

Profits may be increased by as much as 30 to 40¢ a bird when replacement pullets are raised in four separate batches over the year, and when hens are kept in the laying flock about 22 months, Dr. McKee says.

Under Dr. McKee's system, pullet raising is concentrated in the late summer and early winter months. Pullets enter the laying flock when small eggs are most favorably priced relative to medium and large eggs.

Most poultrymen start their pullets once a year in early spring and keep the hens in the flock about 12 months.

By starting the replacement flock in a series of separate batches, Dr. McKee points out that the poultry house is used to near-capacity all year; egg production is more even throughout the year.

The economist studied laying cycles of hens, cost of keeping hens anid price cycles. By balancing costs and returns, he found that in most cases hens can profitably be kept longer even though they go down some in production after their first year.

With long laying periods, the investment in hens is more fully exploited and the annual rate of replacement is reduced, Dr. McKee explains. The result is lower annual costs.

The Michigan State researcher cautions, however, that the most profitable organization of the laying enterprise depends upon many factors. The development of strains of chickens capable of a sustained level of production over a long period would tend to favor keeping hens in the laying flock longer.

Also, movement of the seasonal price pattern might change the time when laying flock replacements should be started. The poultryman must continuously re-evaluate the operation if he is to take advantage of changes that are taking place, Dr. McKee says.

New Design for Grain Storage Bins Revealed

HOUSTON, TEXAS — A new design for grain storage bins and buildings, using corrugated walls, has been announced by the Hawthorne Co., Houston.

The angular corrugation, 3.67 in. thick, gives double strength to the metal sides and prevents distortion from loading, according to the company announcement.

The corrugated steel strips are made into a panel unit by welding a heavier gauge strip along each side. These panels are shipped intact to the job site by rail or truck.

The firm is using the corrugated panels for a grain storage building to be erected in American Falls, Idaho, for Pillsbury Mills, Inc.

Breeding Supervisor

LIVERMORE, CAL. — Animal Breeding Consultants, Livermore, announces that it will supervise the breeding program and perform research functions for Colonial Poultry Farms, Inc., Pleasant Hill, Mo. Dr. Fred T. Schultz, geneticist, will supervise the work personally. Dr. Schultz also directs the breeding and research program of the Nicholas Turkey Breeding Farms.

Don Lehr

Warren D. Foote

Nebraska Crop Group Names Secretary

LINCOLN, NEB. — A Chappell, Neb., high school instructor has been named executive secretary of the Nebraska Grain Improvement Assn., it was announced. He is Warren Duane Foote, vocational agriculture teacher at Chappell for the past 10 years. He succeeds Don Lehr, who has resigned to accept a position in the grain merchandising department of the West Central Cooperative Grain Co., Omaha.

Mr. Foote's appointment to the association post, and also to the position of University of Nebraska extension grain marketing specialist, was effective July 1. He holds bachelor and master's degrees in vocational education from the University of Nebraska. A graduate of Albion High School, he is married and has four children.

Mr. Foote is president of the Nebraska Vocational Agriculture Teachers Assn.; Alpha Zeta, honorary agricultural fraternity; and has served as a certified seed inspector for the Nebraska Crop Improvement Assn. for the past two years.

Dr. John A. Newlander "Retires" Second Time

BURLINGTON, VT.—Dr. John A. Newlander, after 39 years at the University of Vermont, is "stepping down" for the second time in a year.

Dr. Newlander officially retired as animal nutritionist with the Vermont Experiment Station two years ago. He remained in the post until being succeeded by Dr. Albert M. Smith July 1, 1957.

Since that time, however, Dr. Newlander has served as acting head of the animal and dairy husbandry department, substituting for Dr. W. H. Riddell during the latter's illness. Dr. Riddell died recently.

Now, Dr. Newlander is "retiring" once more, being succeeded by Dr. Thomas W. Dowe, experiment station director, as acting head of the animal and dairy husbandry department.

After leaving the university, Dr. Newlander plans to remain active in his profession, serving as a consultant to feed concerns and milk companies on their flavor programs.

Swine Testing

LEXINGTON, KY.—The Kentucky Agricultural Experiment Station's swine-testing station, inaugurated this year, recently received its 20th litter group, reported Prof. C. E. Barnhart, department of animal husbandry. He said it is the last litter group that can be tested until fall, when applications for new test groups will be received.

The station was built at the Coldstream Experiment Farm in Lexington under a $5,000 grant from the state department of economic development.

Purpose of the station is to test producers' litters for desirable characteristics such as backfat thickness, length of side, dressing percentage, etc.

TO BUILD ELEVATOR

FLORENCE, KANSAS—Construction on a 250,000-bu. elevator will be started here by Aug. 1. The cost will be about $150,000. The elevator will measure 70 by 50 ft.

Harry N. Halverson Lowell Robertson

APPOINTED — Harry N. Halverson and Lowell Robertson have been appointed southwestern account sales manager and sales representative for northwest Arkansas, respectively, by Hales & Hunter Co., Chicago, manufacturer of Red Comb and Pioneer Feeds. Mr. Halverson attended the University of Wisconsin, where he received a bachelor's degree in commerce. Before joining Hales & Hunter, Mr. Halverson was sales representative for a feed firm in Wisconsin. He had also been assistant to the credit manager for James Manufacturing Co., Ft. Atkinson, Wis. Mr. Robertson has a bachelor of science degree in animal husbandry from Arkansas State College. Before joining Hales & Hunter, he was a serviceman for Fox De Luxe Feeds, Inc., Springdale, Ark.

W. J. Mellen Appointed To Mass. Poultry Staff

AMHERST, MASS. — Dr. William J. Mellen has joined the poultry department staff at the University of Massachusetts.

His work will involve teaching and research in the fields of avian physiology and genetics, supporting both the genetics and nutrition programs with his work in physiology, said Dr. Dale H. Sieling, dean of agriculture at the school, in announcing Dr. Mellen's appointment. Before the appointment Dr. Mellen was associate professor of poultry physiology at the University of Delaware.

BUYS IOWA ELEVATOR

CENTERVILLE, IOWA—Richard Gale, Centerville, has purchased the elevator at Chillicothe from Charles Frescoln. Mr. Gale had operated a farm supply store at Centerville.

Ohio Researchers Test Lactic Acid Effect on Steers

COLUMBUS, OHIO — Lactic acid, the chemical that makes milk taste sour, is being tested at the Ohio Agricultural Experiment station for its effect on fattening steers.

Dr. Earle Klosterman and Dr. Orville Bently of the department of animal science report that steers given additional lactic acid had slightly better daily gain than control animals. The test involves 42 steers and has been underway for 56 days. Average weight of the control steers at 56 days was 995 lb., compared to 1014 lb. for those given extra lactic acid.

Lactic acid is the major fatty acid in silage. Regular corn silage holds as much as 6½% of lactic acid, experiment station laboratory tests show. Silage made from shelled corn, however, averaged less than 1%. Silage from ear corn fell between 2 and 3% in lactic acid content.

Half the steers were fed ground ear corn. The others got the same ration except for the addition of small amounts of lactic acid mixed in with ground ear corn.

Dr. Klosterman says that more studies are needed to determine the feeding value of lactic acid and to see if the content of lactic acid in corn silage can be increased. In the laboratory, animal scientists have boosted the acid content of both regular and ear corn silage. But it is not known if the same results can be obtained in conventional silos or whether raising the lactic acid content would increase the feeding value of these silages.

Spencer Kellogg Names Superintendent

BUFFALO — Spencer Kellogg & Sons, Inc., Buffalo, has appointed James S. Williams as general superintendent. Mr. Williams joined the company 21 years ago as a chemical engineer in the Edgewater, N.J., mill following his graduation from the University of Virginia with a chemical engineering degree.

He later became works manager of the Chicago mill and three years ago came to Buffalo as staff engineer of the production division.

Michigan State Tests Spiced Broiler Rations

EAST LANSING, MICH. — Can poultry meat be seasoned by feeding spices to the chickens themselves?

This is a question Michigan State University researchers attempted to answer in a recent test conducted by Stanley Newman, Dr. Philip J. Schaible and Dr. L. E. Dawson of the poultry husbandry department. Results of the test were published in the Quarterly Bulletin of the Michigan State University Agricultural Experiment Station.

Certain spices were added to finishing feeds to find out if they would affect the flavor of broilers after they had been baked. Garlic, cloves, celery seed, allspice and sage were added, as well as the flavor enhancer monosodium glutamate, and the feeds were fed to eight-week-old White Rock broilers.

The cooked birds were scored by two taste panels using a hedonic scale for flavor only. Only garlic was identified in the muscle meat after cooking, and garlic-flavored chickens were rated inferior to the control birds. Additions of dienestrol diacetate to the feed appeared to depress the garlic flavor in meat.

Birds fed monosodium glutamate were consistently rated higher than the controls, but the difference was not significant. The other spices did not significantly affect taste appeal.

The report pointed out further that rations spiced at high levels reduced feed consumption, compared with control rations.

California Group Plans Beef Promotion

SAN FRANCISCO — The California Beef Council has announced it will sponsor a campaign to promote the use of less expensive cuts of meat during the summer. The recently-formed industry group has selected Hoefer, Deiterich & Brown, San Francisco advertising firm, to plan the $50,000 promotion.

In connection with the plan, which will center primarily upon point-of-purchase displays, there will be a public relations drive to "stimulate new confidence in the beef industry," and to develop merchandising ideas and programs of value to the food industry. Walter Rodman is manager of the council.

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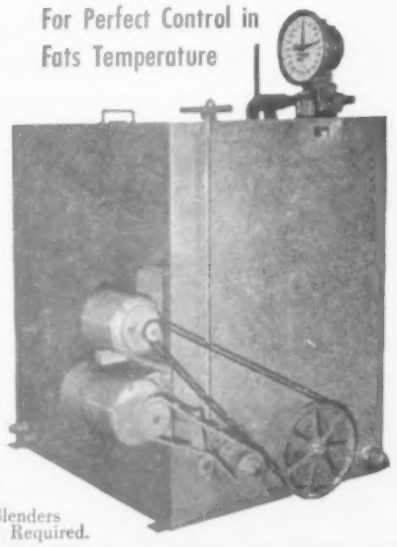

Wenger's Series 100 Animal Fat Feeder was the first Liquid conditioning feeder developed to correctly meter liquid fats at their optimum mixing temperature into continuous mixers or pellet mills producing hard or soft pellets: Special 100 Series also available for feeding fats to batch mixers. Optional remote controls available for both.

Fats are not to be fooled with. The right equipment is required for precision formulas — for economy of production — for satisfaction to your customers. *Now* after three years of use of the first Wenger Fat Feeders installed, mill superintendents report "correct, trouble-free performance".

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Regardless of the turn of the profit cycle, fortifying rations with PRO-STREP is a sound investment. Feeds containing this effective combination of antibiotics help stimulate appetites, enhance growth and improve feed efficiency. PRO-STREP advantages add up to "Profit Insurance" for the poultry or livestock farmer.

Fit The Ration To The Farm–Not all herds or flocks require the same amount of antibiotic protection. On farms where the disease incidence is relatively low, growers can expect excellent results using rations fortified with as little as 25 grams of PRO-STREP per ton of feed. In the presence of disease or at times of stress, rations containing higher

	SWINE		CHICKENS *(Layer and Breeder Rations)*	
Penicillin		Penicillin is absorbed and carried through the blood stream to every part of the body to effectively check pathogenic, gram-positive organisms. Penicillin also stimulates feed consumption, enhances weight gains and feed conversion. Grower is able to market more uniform pigs.		Penicillin is absorbed into the bloodstream of the growing or mature bird. It is carried to every part of the body and is effective against harmful, gram-positive organisms. Penicillin is particularly helpful at times of stress in maintaining or increasing hatchability of fertile eggs.
Streptomycin		Effective for prolonged periods of time in the intestinal tract, streptomycin acts against the gram-negative bacteria so often responsible for bacterial enteritis ("necro"). *Streptomycin will not interfere with the action of beneficial intestinal flora.*		Streptomycin is slowly absorbed from the intestinal tract. It provides "crop-to-vent" protection against pathogenic, gram-negative organisms. Streptomycin will not interfere with the action of beneficial intestinal flora.
A PRO-STREP Level for Every Ration	**LOW LEVEL—25 Gm./ton.** Feed continuously to stimulate growth, improve feed efficiency, increase feed intake and promote better uniformity of gains. **MEDIUM LEVEL—50 Gm./ton.** Feed continuously until pigs are 50-75 pounds to: prevent bacterial swine enteritis; stimulate growth; improve feed efficiency; stimulate feed intake; and help promote better uniformity of gains. If outbreaks of enteritis occur, feeds containing 100 Gm. of PRO-STREP should be used. **HIGH LEVEL—100 Gm./ton.** To treat bacterial swine enteritis feed rations fortified with PRO-STREP for 4-5 days or until symptoms disappear. PRO-STREP at the 100 Gm. level also may be used until pigs are 50-75 pounds to: stimulate growth, improve feed efficiency, increase feed intake and assure better uniformity of gains.		**LOW LEVEL—25 Gm./ton.** Feed continuously as an aid in maintaining or increasing egg production and to stimulate growth and improved feed efficiency. In the presence of disease, rations containing 100 Gm. are recommended. **HIGH LEVEL—100 Gm./ton.** The following claims may be listed on your tags when PRO-STREP is fed at high levels to chickens: **a.** Reduce mortality and hasten recovery from C.R.D. **b.** Treat nonspecific infectious enteritis. **c.** Maintain feed intake and weight gains during C.R.D. and nonspecific infectious enteritis. **d.** Aid in maintaining or improving hatchability (of fertile eggs). **e.** Aid in maintaining or improving egg production. **f.** Prevent early chick mortality due to organisms sensitive to penicillin and streptomycin. **g.** Improve feed efficiency as related to egg production or weight gains. *Suggested feeding schedules:* **1.** Feed the first 10 days—then 3-5 days during, or immediately after, such stress factors as Newcastle disease or bronchitis vaccination, debeaking or housing pullets. **2.** Feed for the first 10 days and then for 3 days out of every week until birds are marketed. **3.** Feed continuously in case of disease outbreaks.	

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levels of PRO-STREP are required to cut disease losses and help maintain feed intake and the efficient production of meat or eggs.

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Here's how the dual action of Procaine Penicillin and Streptomycin Sulfate in rations fortified with PRO-STREP will help improve feed efficiency, fight disease and enhance growth in turkeys, broilers, layers and swine.

CHICKENS *(Starter and Grower Rations)*

Penicillin is absorbed into the chick's bloodstream and carried to every tissue and organ in the body. Penicillin is effective against the gram-positive organisms. Many of the bacteria susceptible to penicillin are incriminated in secondary and subclinical infections in young chicks.

Penicillin also has a profound effect on stimulating growth, enhancing effective feed conversions and stimulating feed consumption.

Streptomycin is slowly absorbed from the intestinal tract. It provides "crop-to-vent" protection against harmful, gram-negative organisms. *Streptomycin will not interfere* with the action of beneficial intestinal *flora.*

LOW LEVEL—25 Gm./ton. Feed continuously to stimulate growth of chicks and to improve feed efficiency.

In presence of disease, recommend rations containing 100 Gm. of PRO-STREP.

HIGH LEVEL—100 Gm./ton. The following claims may be listed on your tags when PRO-STREP is fed at high levels to chickens:

a. Reduce mortality and hasten recovery from C.R.D. **b.** Treat nonspecific infectious enteritis. **c.** Maintain feed intake and weight gains during C.R.D. and nonspecific infectious enteritis. **d.** Aid in maintaining or improving hatchability (of fertile eggs). **e.** Aid in maintaining or improving egg production. **f.** Prevent early chick mortality due to organisms sensitive to penicillin and streptomycin. **g.** Improve feed efficiency as related to egg production or weight gains. *Suggested feeding schedules:*

1. Feed the first 10 days—then 3-5 days during, or immediately after, such stress factors as Newcastle disease or bronchitis vaccination, debeaking or housing pullets. **2.** Feed for the first 10 days and then for 3 days out of every week until birds are marketed. **3.** Feed continuously in case of disease outbreaks.

TURKEYS

Penicillin, absorbed into the bloodstream, affords maximum protection in all the tissues and organs of the body against the effects of gram-positive pathogens. Penicillin also is valuable in promoting economical weight gains in poults.

Streptomycin provides "crop-to-vent" protection against gram-negative organisms in the bird's intestinal tract. Slowly absorbed from the intestines, *Streptomycin does not interfere with the action of beneficial intestinal flora.*

LOW LEVEL—25 Gm./ton. For best results turkeys should be placed on low levels from hatching until they are 16-20 weeks of age. Low-level antibiotic rations will stimulate growth and improve feed efficiency. In the presence of disease, or on farms where the disease level is high, use rations containing 100 Gm. of PRO-STREP.

HIGH LEVEL—100 Gm./ton. At this level rations fortified with PRO-STREP will: treat bluecomb and infectious sinusitis; help maintain weight gains during outbreaks of these two diseases; prevent early mortality of poults due to organisms sensitive to either streptomycin or penicillin; help reduce losses following periods of stress such as vaccination, debeaking, chilling, moving, overheating; improve weight gains and feed efficiency in poults even in the presence of disease.

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*Trademark of Merck & Co., Inc. for glycarbylamide.

Dairy Industry Shows Striking Changes In Production and Marketing of Products

By HERBERT C. KRIESEL
U.S. Department of Agriculture

EDITOR'S NOTE: The author of the accompanying article is an agricultural economist with the Agricultural Marketing Service of USDA in Washington and is editor of USDA's periodic Dairy Situation report. The article is from Agricultural Marketing, a publication of the AMS. Mr. Kriesel discusses changes under way in the dairy industry in the U.S. and their impact on production and marketing of dairy products. Feed men will find the article of interest and help in their serving of dairy farmers.

v v

Some of the most striking changes in the marketing of agricultural products since World War II have occurred in the dairy industry. Although not particularly significant in the over-all trends in production and consumption, these changes have far-reaching implications for everybody concerned with the dairy business.

Dairy farming, for instance, has become more specialized and more commercial.

The increased specialization can be seen in the declining number of farms with milk cows. Each year, 4 or 5% of the farms in this country quit keeping milk cows. At the same time, however, the total number of milk cows on farms has declined an average of only 1% a year. Despite this decrease, production per cow has risen enough so that total production has increased.

Increased Commercialization

The increased commercialization of dairying can be noted in the gradual boost in milk marketing. Dairy farmers today sell about 90% of their milk output, whereas in the mid-1920's they marketed only about 75%. In other words, farmers used to use one fourth of their milk output for home consumption and animal feed; today, only 10%.

Since these figures use milk fat as the common denominator, they do not take into account the big increase in farm sales of the nonfat component of milk. Dairy farmers now sell only about 10% of their total milk marketings in the form of separated cream. Cream sales in the 1920's and early 1930's amounted to 33%.

The importance of milk and cream retailed by farmers and the sales of farm-churned butter also have declined over the years. Furthermore, farmers themselves are using less of the milk they produce. This partly reflects the decline in number of households that keep milk cows and the shift away from churning butter for farm use.

Reasons for Shifts

What has encouraged farmers to shift from the sale of cream to whole milk? First of all, there were technological advantages. Improved facilities for preserving and handling whole milk—particularly with bulk milk tanks—have allowed the dairy farmer to increase his production volume. Also, he is finding it profitable to spend more time on other phases of his farming enterprise; thus, he has less available time for separating milk.

Economic advantages also persuaded many farmers to shift to the sale of whole milk. Farmers receive a higher return if they sell whole milk instead of selling only butterfat and then feeding the skimmed milk to their livestock.

Because of the increase in sales of whole milk, about three fourths of the total output of nonfat milk solids in recent years has been used for food compared with a little more than half 30 years ago. Not only has the use of nonfat dry milk itself increased, but more solids-not-fat is being consumed in other dairy products. Out of all this has come an improved level of nutrition for the consumer, increased cash receipts for the dairyman, and a larger total volume for handlers and processors.

Role of Consumer

The pattern of milk utilization, however, depends mainly on the tastes and preferences of the American consumer. As these preferences shift among the various products, price relationships are altered and the pattern of utilization of the nation's milk supply shifts.

Recent trends in butter output and consumption are an outstanding example of the role played by the consumer. In the past 15 years, per capita use of butter in the U.S. has declined markedly. Average per capita consumption in 1935-39 was 17 lb.; today it's somewhere between 8 and 9 lb. As a result, the proportion of milk used for butter manufacture has declined sharply from 40 to 25% of all milk sold by farmers.

Manufacture of evaporated milk in recent years has declined following a long period of general increase. Today, about 5% of the milk sold by farmers goes for evaporated. In 1945 this use was at a wartime peak of 8.3%. In the mid-1920's and early 1930's, evaporated milk accounted for about 4% of all milk sold.

The amount of milk used in the manufacture of cheese and frozen dairy products has increased considerably in the past 30 years. These two groups of dairy products now take about 20% of all milk sold by farmers, compared with about 12% in the mid-1920's.

Other Factors

Not all of these changes have come about as a result of consumer demand. Two other factors also play a part in determining the pattern of milk utilization. These are the government price support program and other special measures such as our

BULK MILK SHIPMENTS EQUAL CAN DELIVERIES

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WASHINGTON — Some time this year, bulk milk deliveries will surpass can deliveries in the total market receipts of the federal order markets. This prediction is based on a survey made by the dairy division of the Agricultural Marketing Service in 67 of the 68 markets where federal milk orders were effective in January of this year. Agricultural Marketing, a publication of the AMS, said 47% of the total market receipts of milk in these areas in 1957 came from farms using bulk equipment. It also pointed out that during the past year, the shift from can to bulk tank deliveries represented 14% of total market receipts and that during the previous year the shift was 17% in a comparable group of markets. If this trend continues, the publication said, bulk deliveries will pass—or already have passed—50% in 1958.

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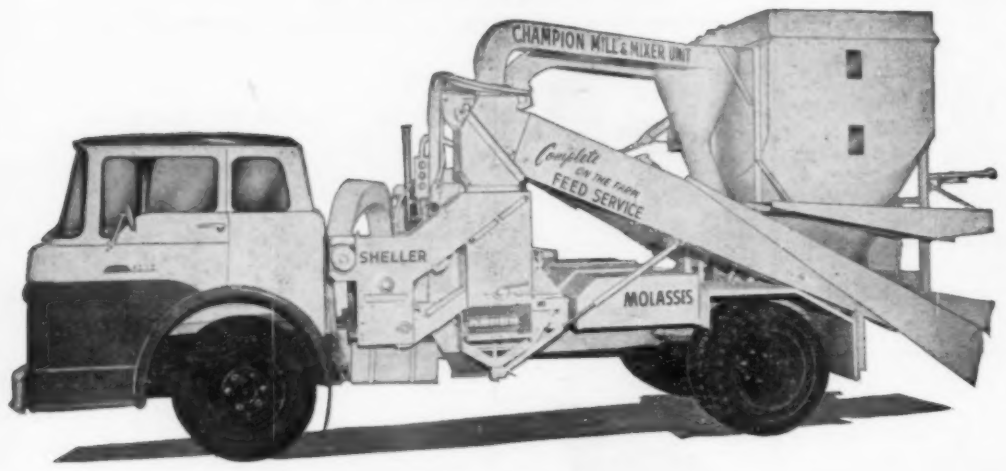

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KANSAS CITY, MO.

M. (Mike) Wiernik

TECHNICAL REPRESENTATIVE—The appointment of M. (Mike) Wiernik as technical representative for the agricultural division of White Laboratories, Inc., Kenilworth, N.J., has been announced by Vernon L. Hill, director of the division. He said Mr. Wiernik will be especially active in promoting wider uses of the company's agricultural products. Mr. Wiernik has studied at Temple University and the Philadelphia College of Pharmacy. He was formerly associated with McKesson & Robbins, Inc., and with Chas. Pfizer & Co.

export program during World War II.

Obviously, a sizable increase in export of one dairy item tends to increase the production of that item in comparison with other dairy products. The price support program, on the other hand, affects milk utilization by removing most of the surplus milk through its purchases of butter, American cheese, and nonfat dry milk.

Under its price support program, the government has purchased in the past three years between 4 and 5% of the total milk fat produced on farms. It also purchased between 5 and 8% of total output of nonfat solids. But because the surplus was channeled wholly to butter, American cheese, and nonfat dry milk, government purchases were equivalent to the following percentages of production of these items: butter, 12%; American cheese, 24%; and nonfat dry milk solids, 48%.

The rate of change in the whole pattern of milk utilization seems to have slowed down considerably in recent years, but there is no reason to expect that the over-all change will cease entirely. Conceivably, significant technological innovations could set off a new series of adjustments.

BUYS STORAGE PLANTS

ODESSA, WASH. — The Odessa Trading Co. has purchased the grain storage plants of the Milwaukee Grain Co. at its Batum, Moody and Ruff stations. The company has had the plants under lease. The firm is also building grain receiving facilities at Bruce station on the Milwaukee railroad.

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Oregon Dealers Set Dates for Convention

PORTLAND, ORE.—The annual convention of the Oregon Feed & Seed Dealers Assn. will be held March 19-20 in the Multnomah Hotel, Portland. The date was selected at a recent regular meeting of the association board of directors.

Russ Inman, Inman & Co., Portland, will serve as general convention chairman.

On European Trip

KANSAS CITY — Oak Smith of Kansas City, director of market research for the Wenger Mixer Manufacturing Co., has left on a trip to Europe. He will return at the end of July. Mr. Smith will visit customers and representatives in Belgium, France, Austria and Germany, with stops also in the Netherlands, Denmark and England.

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DIVISION
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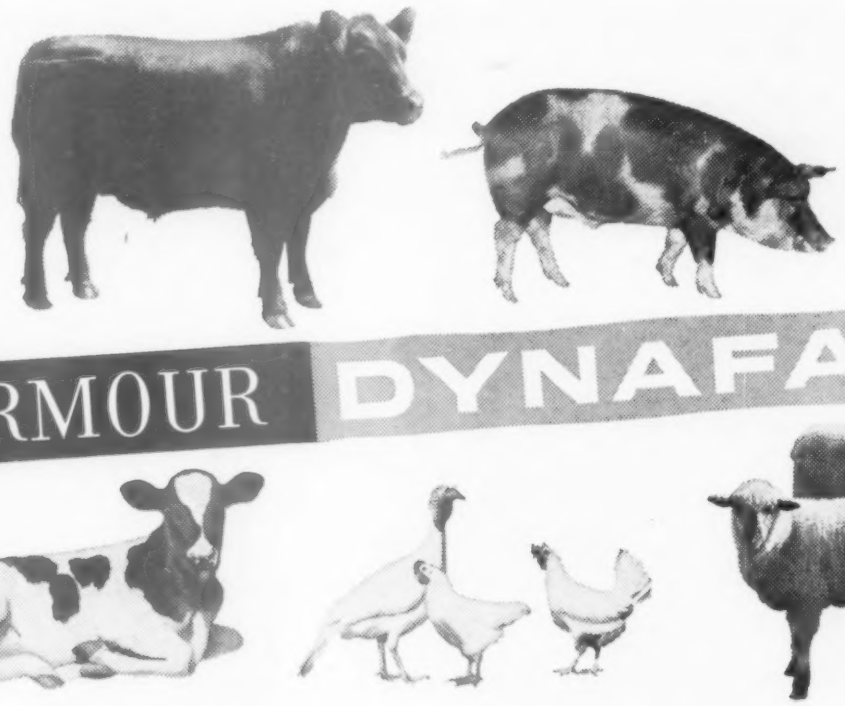

ARMOUR DYNAFAC, THE CHEMOBIOTIC ADDITIVE,

HELPS LIVESTOCK AND POULTRY MAKE BETTER USE OF FEED --

PROVIDES EXTRA HEALTH INSURANCE

BEEF CATTLE—Dynafac boosts gains by 10 to 15%. It knocks out harmful bacteria in the intestinal tract—does not disturb beneficial organisms in the rumen. Fed with or without stilbestrol, Dynafac gives improved performance, cattle look better; improved bloom with Dynafac is unmistakable and these animals stay on feed!

CALVES (beef and dairy)—Dynafac builds a healthy, husky dairy heifer with the foundation for a high-producing milker. Beef calves show the same fast response to Dynafac—heavier weaning weights and lower-cost gains.

HOGS—Dynafac promotes growth and helps control scours. Dynafac has often brought scours under control where other remedies have failed. To date, no Dynafac-resistant strains of scours-causing bacteria have been observed. In controlled tests hogs on Dynafac usually show 10 to 20% greater gain.

LAMBS—1/2 lb. daily gain or better is normal for good lambs getting Dynafac in a balanced ration. It counters stress conditions—gets lambs off to a fast start for early gains. Feedlots that have regularly had 5 to 7% death loss report mortality down to less than 1% for lambs on Dynafac.

POULTRY—(layers, broilers, turkeys)—Dynafac controls harmful bacteria in the intestinal tract without impairing beneficial organisms. Selective chemobiotic action produces a healthy digestive canal—enables a bird to get more nutrients from its feed. This means faster growth and heavy production.

NOTE: FUNGI GROWTH IN THE DIGESTIVE TRACT is common in livestock and poultry. Fungal organisms impair growth and vitality—or in severe cases kill an animal or bird. Dynafac knocks out fungi on contact by destroying its reproductive spores.

ARMOUR AND COMPANY, CHICAGO, ILLINOIS

Dynafac is distributed nationally for Armour by the Chemical Department, McKesson & Robbins, Inc. Write us for further information.

Washington Feed Man Uses Novel Approach To Boost His "Rooster Booster" Feeds

By JOHN G. WILSON
Washington State Feed Assn.

A new advertising approach for a formula feed which has never been sold in any other part of the nation—"Rooster Booster."

That's what Chester Fellowes Burdic, owner-operator of the Burdic Feed Stores in the State of Washington, calls his brand of feed.

Mr. Burdic is better known as the feed industry's "clown prince." This off-the-cuff philosopher uses an advertising approach that warrants attention.

At the time of the opening of a new branch in Kent, Wash., various advertising media carried messages that would probably give due credit to a long-haired advertising genius after he had consumed his fifth double on the rocks.

Here are a few of the gems offered:

"Look what we've helped hatch—a new home for Rooster Booster in Kent, Wash.

"Our trade name (copyrighted with the Kinsey Reports, Inc., and the Society for the Suppression of Meaningless Monograms) has been an automatic outgrowth of our rather surprising broiler and fryer mash volume.

"We have a small number of frank testimonials if you'd care to thumb through them. But we'd frankly rather have you try the feed yourself to see what it will do for you. Your rooster, we mean."

Mr. Burdic is not one to take all of the credit for his success. He paid tribute to his creditors in the following manner—quoting from one of his ads: "Below is a partial list of our more persistent creditors who wish us every success for what should be obvious reasons."

ROOSTER BOOSTER—The rather unusual trade name "Rooster Booster" is used by Chester Fellowes Burdic, owner of the Burdic Feed Stores in the State of Washington. Pictured here is the Rooster Booster sign, atop the firm's headquarters location in Kent, Wash.

First Store in 1933

Mr. Burdic started his first feed store in 1933, and then in 1937 he purchased his father's feed business. Because his grandfather had started the original store in South Seattle in 1889, Mr. Burdic claims to be the owner of the "oldest feed business in western Washington operating continually on a shoestring."

This feed man has had quite a time in having to relocate stores because of urban growth.

His original store was at South Park, now a part of the city of Seattle. Some years back, he decided to build another feed mill as the original mill at South Park became somewhat surrounded by the Boeing aircraft firm and other industries. This South Park store is now mainly a garden supply store.

The new feed mill was built on leased property, on highway 99 out of Seattle. This became the headquarters for Burdic Feed Stores. After about 15 years in this location, Boeing once again became a factor, purchasing the property for future use. Mr. Burdic had to look for another location.

The third location was at Kent, Wash., where Mr. Burdic purchased a feed mill and general store owned by the Granger's Warehouse Co. This was opened as a branch. It is now the headquarters, as Boeing later built on the property occupied by the second store.

At Kent, the general store building is now a large garden supply store, and Mr. Burdic's office is in this building. Across the street from the garden supply store is the feed mill, which has been modernized.

Meanwhile, Mr. Rooster struts his stuff, as shown in the accompanying picture.

RETIRED FEED MAN DIES

ROLLA, MO.—Frank H. Blue, Rolla, died recently after a brief illness. Mr. Blue was associated with Rolla Feed Mills, Inc., until his retirement in 1955. He had spent the greater part of his life in the feed business, starting in Newburg, Mo. and moving to Rolla in 1936 in partnership with Murray Renick. Surviving are his wife, two daughters, and five grandchildren.

put your confidence in

PETER HAND VITAMIN A

consistently superior performance

under varying conditions

Peter Hand

Claims and counter claims by suppliers of Vitamin A do not make a superior product. What your customers expect of the Vitamin A in your feeds is that it will be readily assimilated by their animals...and that the vitamin potency will be retained during storage, under varying heat, humidity and mineral conditions.

availability: *Continuing research proves that no real difference can be said to exist in the availability of major, commercially accepted Vitamin A Products. However, Peter Hand Vitamin A is above the average line of response more often than any other. (Test #A1-58C)* The important difference in Vitamin A products is in their stability.*

stability: *Exhaustive tests under varying conditions prove the consistently superior stability of Peter Hand Vitamin A...*

- In PELLETED FEEDS (Test #L-53-54-2)*
- In MASHES (Test #L-53-54-1)*
- In VITAMIN PREMIXES (Test #A-4-54)*
- In MINERAL BLENDS (Test #L-54-40)*
- In WATER (Test #L-54-37)*

PETER HAND VITAMIN A in beadlet form is available in a wide variety of potencies, from 5,000 U.S.P. units to 250,000 U.S.P. units per gram.

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Division of Peter Hand Brewery Co.
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also superior quality custom premixes blended to your exacting specifications

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*For complete details and information on results and conditions of testing please mail this coupon.

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1000 North Ave., Chicago 22, Illinois
Please send me complete testing details, plus full data and recommended usage on Peter Hand Vitamin A.

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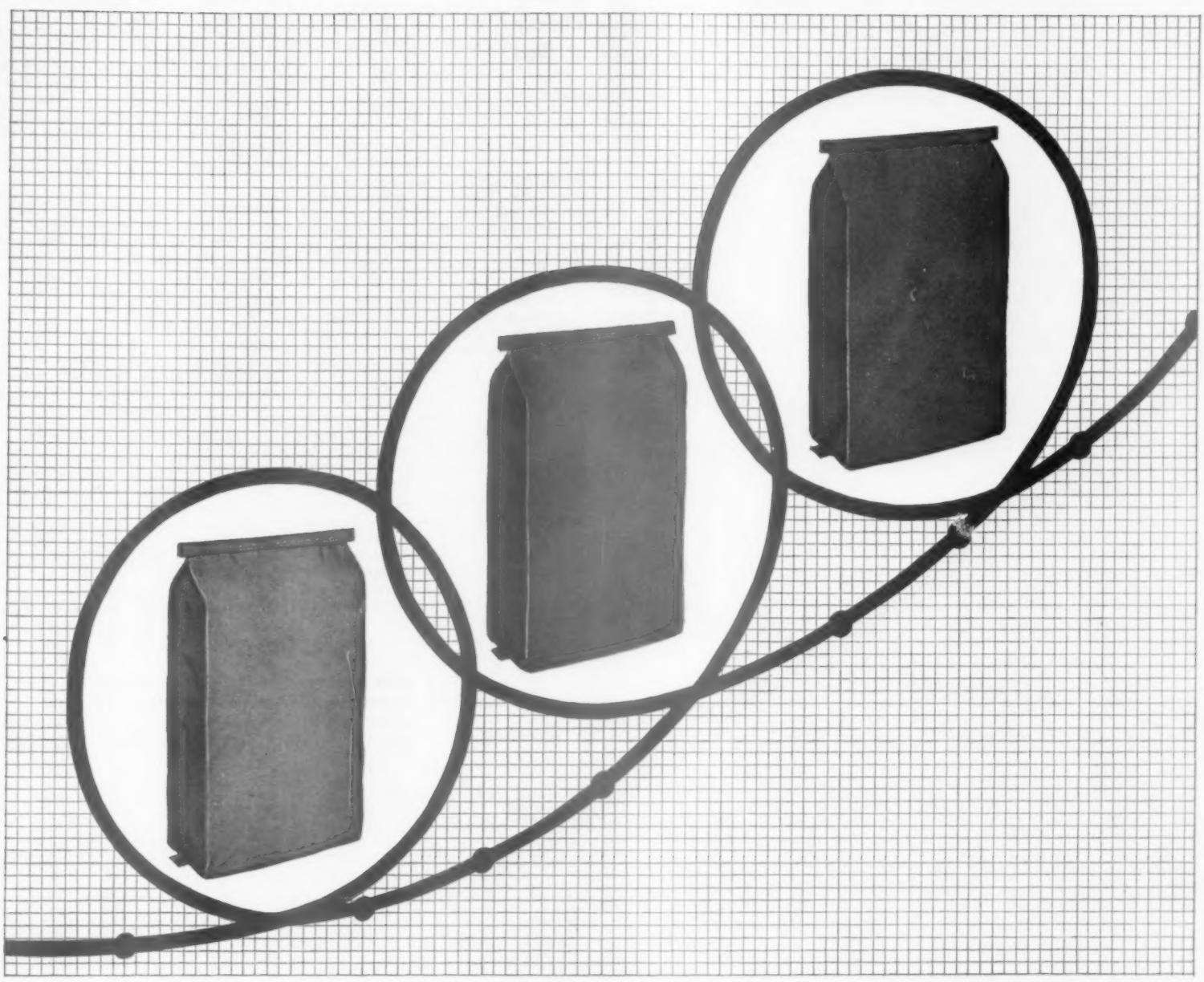

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The colored kraft is made in Bemis' own Peoria Mill and there is a paintbox assortment of supermerchandising colors ready for prompt shipment. Do you have a special color in mind? Bemis can match it.

Put good-looking Bemis printing on good-looking Bemis colored kraft, and it's SELL, SELL, SELL!

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Studies on High Efficiency Broiler Rations*

A Report on Feeding Tests in Which Broilers Were Grown to Market Weight on Only Slightly More than 1 Pound of Feed Per Pound of Bird

By G. F. Combs, E. C. Quillin and N. V. Helbacka, University of Maryland, College Park, and C. D. Caskey, Cooperative Mills, Baltimore, Md.

EDITOR'S NOTE: The results of some record-breaking broiler feeding trials were presented in a "Feed to Food" demonstration at the recent American Feed Manufacturers Assn. convention in Chicago. Reporting on the work were Dr. Gerald F. Combs, University of Maryland poultry nutritionist, and Dr. C. D. Caskey of Cooperative Mills, Baltimore. In the accompanying article, Dr. Combs and co-authors describe the results of the second of two trials and provide interpretive comment on some of the findings.

In the May 24 issue of Feedstuffs, the results obtained in the first of two experiments involving high efficiency experimental broiler feeds were presented. Both this and a second experiment were the source of data presented at the American Feed Manufacturers Assn. annual meeting in May as a part of the "Feed to Food" program. The results of the second test are described here.

Unlike the first trial, which involved only Vantress X Arbor Acre crossbred male broilers (from Arbor Acres), the second test included three different sources of rapidly growing crossbred male broilers. Two of these were Vantress X Arbor Acre crossbreds, and the third was a Vantress X Nichol 108 crossbred. Eight different rations were fed, each to three lots of 13 chicks. In this way all of the rations were tested with each of the three sources of broilers.

In this study, the chicks were transferred from starting batteries to growing batteries without heat at four weeks of age.

Rations Used

As in the first trial, one series of three pens received the modified 1912 feed which has been described (Feedstuffs, May 24, 1958, page 30). In addition, one commercial low fat broiler feed containing approximately 1,000 Calories of productive energy per pound and 24% protein was fed to another series of three pens. This formula is a closed formula so that its composition cannot be given. Also, a practical ration modified to contain a higher fat level and other additives was used. The percentage composition of these, as well as the remaining feeds used, is given in Tables 1 and 2.

Rations 3a, 3b and 3c in Table 1 represent the modified practical rations, each being used for approximately two-week periods. Rations 4a and 4b represent starter and finisher feeds very similar to ration 2 used in Trial 1. The finishers made in this trial were obtained primarily by the addition of fat to starter. Ration R5, also found in Table 1, was fed throughout the test period and is similar to ration 4 used in Trial 1. Rations 4a, 4b and R5 were composed of practical ingredients only. Ration R3a was a crumbled feed, and rations R3b, 3c and R5 were fed as pellets. These were pelleted before the supplemental fat was added. One difference in the formulas used in Trial 2 as compared to Trial 1 is that part of the corn oil was replaced with tallow in Trial 2 in order to improve the feed texture.

Composition of rations 6a, 6b, 7a, 7b, 8a and 8b is given in Table 2. These rations contain ingredients which are not suitable for practical use. The "a" rations were used during the first four weeks and the "b" rations after that time. Rations 6a, 7a and 8a compare closely with rations 7, 8 and 10 used in Trial 1. However, these contained whole egg in Experiment 2, whereas egg yolk was used in Trial 1.

The calculated partial compositions of these rations is also given at the bottom of Tables 1 and 2. It is of interest to note that ration 8b was calculated to contain 1,959 calories of productive energy per pound and 50.9% fat. This ration, of course, was used only after four weeks.

All pens of broilers were carried until they reached an average weight of approximately 3 lb. Although intermittent weights and feed conversion were taken at approximately weekly intervals, the feed per unit weight was determined as well as the age at which each pen reached its 3-lb. average weight. A summary of this information is given in Table 3. It is noteworthy that one group reached a 3-lb. average weight in 50¼ days with a feed conversion of 1.04. This means that each 3-lb. broiler had consumed an average of 3.12 lb. of total feed. Several other groups showed excellent conversions of 1.07, 1.10, 1.13, etc. These very excellent conversions were obtained with semi-purified type rations containing ingredients not suitable for practical use.

Excellent results were obtained, however, with the rations composed only of practical ingredients. Feed conversions of 1.19 to 1.37 were obtained. One of these groups reached 3-lb. average weight on the 46th day, which is two days longer than was required in the first trial.

The 1958 low-fat commercial feed supported somewhat less rapid growth than was supported by the modified 1958 commercial feed containing the high fat level or the 1958 special rations, except for ration series 8. Feed conversion ranged from 1.79 to 1.98 with the commercial ration, and 1.54 to 1.70 with the modified 1958 commercial ration. Growth rate of the broilers fed the modified commercial ration was as rapid as that obtained with any of the 1958 special rations.

Gizzard and Liver Weights

The results obtained with each of the three groups of chicks from different sources have been combined by ration series, and are shown in Table 4. In addition to average days to reach 3 lb. and feed conversion at that weight, both average gizzard and liver weights are also included. The gizzard weights were appreciably less when the semi-purified diets were used or when the high-fat mash rations were fed. It is interesting

*This article, prepared exclusively for Feedstuffs, has been assigned Misc. Pub. No. 323, Contribution No. 2928, by the Maryland Agricultural Experiment Station (Department of Poultry Husbandry).

TABLE 1. High Efficiency Rations Composed of Practical Ingredients—Trial II
(Unpublished, University of Maryland and Cooperative Mills, Inc.)

Ingredients	Period:	(0-2 wks.)	(2-4 wks.)	(after 4 wks.)	(0-4 wks.)	(after 4 wks.)	(entire period)
	Ration No.:	R-3a	R-3b	R-3c	R-4a	R-4b	R-5
Ground yellow corn, lb.		40.00	40.00	40.00	9.99	9.73	28.68
Corn oil, lb.		10.00	12.50	15.00	17.72	19.65	13.02
Tallow, lb.		....	....	....	11.81	11.72	6.72
Hyd. animal & vegetable fat, lb.		1.25	1.20	1.12	....	....	....
Fish meal, menhaden, lb.		5.00	4.75	4.50	17.23	16.78	14.69
Meat scrap, 55%, lb.		1.25	1.19	1.13	....	....	....
Fish solubles, 50% solids, lb.		0.75	0.71	0.67	....	....	....
Hyd. poultry feathers, lb.		3.12	2.96	2.81	2.46	2.40	2.10
Poultry by-products meal, lb.		....	....	....	9.84	9.59	8.40
Soybean oil meal, 50%, lb.		29.60	28.12	26.65	17.23	16.78	14.69
Corn gluten meal, lb.		2.75	2.61	2.48	4.92	4.79	4.20
Dried brewers yeast, lb.		....	....	....	4.92	4.79	4.20
Dehyd. alfalfa meal, 17%, lb.		2.50	2.38	2.26	....	....	....
Dl-methionine, lb.		0.1	0.095	0.09	0.15	0.14	0.13
Glycine, lb.		....	....	....	0.25	0.24	0.21
Creatine, lb.		....	....	....	0.02	0.02	0.02
Butylated hydroxy toluene, 100%, lb.		....	....	....	0.02	0.02	0.02
Butylated hydroxy toluene, 25% conc., lb.		0.033	0.031	0.03	....	....	....
Limestone, lb.		0.9	0.85	0.8	1.23	1.20	1.05
Dicalcium phosphate, lb.		1.88	1.79	1.7	0.98	0.96	0.84
Salt (NaCl), lb.		0.5	0.48	0.45	0.44	0.43	0.38
Sea salt, lb.		....	....	....	0.1	0.1	0.1
Trace mineral mix (Delamix), lb.		0.1	0.095	0.09	0.20	0.19	0.17
Potassium chloride, lb.		....	....	....	0.20	0.19	0.17
Zinc chloride, gm.		....	....	....	3.54	3.45	3.02
ZnO, gm.		1.75	1.66	1.57	....	....	....
Na selenite, gm.		....	....	....	0.025	0.024	0.02
Na molybdate, gm.		....	....	....	0.05	0.05	0.04
Choline chloride (100%), lb.		0.194	0.184	0.174	0.2	0.19	0.16
Vitamin D_3 (15,000 ICU/gm.), gm.		....	....	....	6.64	6.47	5.67
Vitamin D_3 (3,000 ICU/gm.), gm.		0.05	0.048	0.046	....	....	....
Vitamin A (20,000 IU/gm.), gm.		....	....	....	26.60	25.88	22.67
Vitamin A (1,500 IU/gm.), gm.		0.075	0.07	0.066	....	....	....
Menadione sodium bisulfite, gm.		0.125	0.119	0.113	0.25	0.24	0.21
Folacin, gm.		0.05	0.048	0.045	0.10	0.10	0.08
Vitamin E acetate, gm.		0.15	0.143	0.135	0.98	0.98	0.84
Pyridoxine, gm.		0.15	0.143	0.135	0.49	0.48	0.42
Biotin, gm.		....	....	....	0.02	0.02	0.02
d-Ca pantothenate, gm.		0.45	0.428	0.405	1.48	1.44	1.26
Niacin, gm.		1.80	1.71	1.62	1.77	1.73	1.51
Riboflavin, gm.		0.30	0.285	0.27	0.39	0.38	0.34
Thiamin, gm.		....	....	....	0.2	0.19	0.17
Vitamin B_{12}, mg.		2.5	2.37	2.25	3.45	3.36	2.94
Oleandomycin, gm.		....	....	....	1.48	1.44	1.26
Antibiotics,* gm.		0.8	0.76	0.72	....	....	....
3-Nitro, 4-hydroxy phenyl arsonic acid, gm.		1.125	1.069	1.01	....	....	....
Total, lb.		100	100	100	100	100	100
Calculated Analyses:							
Productive energy, cal./lb.		1124	1176	1228	1420	1459	1285
Crude protein, %		26.6	25.4	24.2	32.64	31.78	29.56
C/P ratio		42.3	46.3	50.7	43.50	45.90	43.47
Crude fat, %		13.85	16.25	18.62	33.77	35.52	24.13

*Consisted of 27.5% procaine penicillin and 72.5% oleandomycin.

TABLE 2. High Efficiency Semi-Purified Rations—Trial II
(Unpublished, University of Maryland and Cooperative Mills, Inc.)

Ingredients	Period:	(0-4 wks.)	(after 4 wks.)	(0-4 wks.)	(after 4 wks.)	(0-4 wks.)	(after 4 wks.)
	Ration No.:	R-6a	R-6b	R-7a	R-7b	R-8a	R-8b
Corn starch, lb.		....	....	9.10	8.75	....	....
Corn oil, lb.		17.62	19.59	21.57	20.74	10.0	28.12
Tallow, lb.		11.75	12.01	....	....	....	....
Drackett C-I Assay Protein, lb.		23.49	22.75	25.48	24.51	11.0	8.79
Casein crude, lb.		4.89	4.74	4.55	4.38	....	....
Dried whole egg, lb.		19.58	18.96	18.20	17.50	70.0	55.92
Fish meal, menhaden, lb.		14.68	14.22	13.65	13.13	....	....
Dl-methionine, lb.		0.10	0.09	0.09	0.09	....	....
Glycine, lb.		0.20	0.19	0.18	0.18	0.75	0.60
Limestone, lb.		2.20	2.13	2.05	1.97	3.50	2.80
Dicalcium phosphate, lb.		2.45	2.37	2.28	2.19	1.50	1.20
Potassium chloride, lb.		1.17	1.14	1.09	1.05	1.20	0.96
Magnesium sulfate, lb.		0.44	0.43	0.41	0.39	0.45	0.36
Sodium chloride, lb.		0.64	0.62	0.59	0.57	0.80	0.64
Sea salts, lb.		0.15	0.15	0.14	0.13	0.15	0.12
Zinc chloride, gm.		8.81	8.53	8.19	7.88	9.00	7.19
Santoquin, 100%, lb.		0.025	0.024	0.023	0.02	0.025	0.02
Na selenite, gm.		0.025	0.024	0.023	0.02	0.025	0.02
Na bromide, gm.		0.88	0.85	0.82	0.79	0.90	0.72
H_3BO_3, gm.		0.44	0.43	0.41	0.39	0.45	0.36
$Na_2SiO_3 \cdot 9H_2O$, gm.		2.20	2.13	2.05	1.97	2.25	1.80
Na $MoO_4 \cdot 2H_2O$, gm.		0.44	0.43	0.41	0.39	0.45	0.36
$K_2Al_2(SO_4)_4 \cdot 2H_2O$, gm.		4.36	4.22	4.05	3.89	4.45	3.56
KI, gm.		3.52	3.41	3.28	3.15	3.60	2.88
$CoSO_4 \cdot 7H_2O$, gm.		0.09	0.09	0.08	0.08	0.09	0.07
$MnSO_4 \cdot H_2O$, gm.		13.80	13.36	12.83	12.34	14.1	11.26
$CuSO_4 \cdot 5H_2O$, gm.		0.88	0.85	0.82	0.79	0.90	0.72
$FeSO_4 \cdot 7H_2O$, gm.		22.02	21.33	20.48	19.69	22.5	17.96
Choline chloride, 100%, lb.		0.39	0.38	0.36	0.35	0.35	0.28
Vitamin D_3 (15,000 ICU/gm.), gm.		8.81	8.53	8.19	7.88	9.00	7.19
Vitamin A (20,000 IU/gm.), gm.		27.60	26.73	25.67	24.68	28.2	22.53
Vitamin E acetate, gm.		1.32	1.28	1.23	1.18	1.35	1.08
Menadione sodium bisulfite, gm.		0.44	0.43	0.41	0.39	0.45	0.36
Biotin, gm.		0.035	0.030	0.033	0.032	0.036	0.029
Pyridoxine, gm.		1.32	1.28	1.23	1.18	1.35	1.08
Folacin, gm.		0.66	0.64	0.61	0.59	0.67	0.54
Niacin, gm.		4.40	4.27	4.10	3.94	4.50	3.60
Ca pantothenate, gm.		2.64	2.56	2.46	2.36	2.70	2.16
Riboflavin, gm.		1.32	1.28	1.23	1.18	1.35	1.08
Thiamin, gm.		0.88	0.85	0.82	0.79	0.90	0.72
Ascorbic acid, gm.		0.88	0.85	0.82	0.79	0.90	0.72
Para amino benzoic acid, gm.		0.22	0.21	0.205	0.197	0.225	0.180
Oleandomycin, gm.		1.47	1.42	1.37	1.31	1.50	1.20
Vitamin B_{12}, mg.		5.19	5.02	4.82	4.64	5.30	4.23
Total, lb.		100	100	100	100	100	100
Calculated Analyses:							
Productive energy, cal./lb.		1650	1691	1518	1576	1722	1959
Crude protein		41.47	40.13	41.54	39.8	41.27	32.96
C/P ratio		39.8	42.1	36.6	39.6	41.7	59.43
Crude fat		38.47	40.45	30.1	33.0	38.55	50.92

TABLE 3. Results Obtained with High Efficiency Rations*—Trial II

Group		Rations	Age, in days	Av. wt., lb.	Feed req./ unit wt.	No. surv. birds†
2‡¶	a	1958 Commercial	50½	3.01	1.79	10
	b	Feed	54¾	3.03	1.98	9
	c	(low fat)	49	3.04	1.81	11
3‡	a	Modified 1958	45¾	3.02	1.54	13
	b	Commercial Feed	47¾	3.01	1.59	13
	c	(high fat)	49	3.00	1.70	13
4	a	Rations	45¾	3.03	1.19	13
	b	Composed	48¾	3.04	1.31	12
	c	of	47	3.00	1.28	13
5‡	a	Practical	47	3.04	1.37	13
	b	Ingredients	46¾	3.08	1.28	13
	c	Only	49¾	3.05	1.30	13
6	a	Rations	47	3.08	1.10	13
	b	Contained	51¾	3.08	1.18	13
	c	Some	47	3.03	1.23	13
7	a	Ingredients	47	3.01	1.16	13
	b	Not	47¾	3.00	1.27	11
	c	Suitable	48	3.24	1.10	13
8	a	For	52	3.00	1.07	13
	b	Practical	50¼	3.04	1.04	12
	c	Use	50¾	3.02	1.13	13

*Unpublished data, University of Maryland and Cooperative Mills, May 20, 1958.
†Thirteen crossbred males used per group at start. Groups a, b, c, represent different chick sources.
‡Pelleted form, others fed as mashes.
¶Two removed from groups 2b and 2c and three removed from group 2a for display (45th to 49th day).

TABLE 4. Comparison of Age and Feed Conversions of Broilers when the Different Feeds were Used to Reach 3-lb. Weights*

Ration	Type of feed	Age, in days	Av. wt., lb.	Feed required/ unit wt.	Gizzard wt., gm.	Liver wt., gm.
2	Commercial (low fat)	51.4	3.03	1.86	20.8	28.3
3	Modified Commercial (high fat)	47.5	3.01	1.61	21.8	25.8
4	Composed of Practical	47.2	3.02	1.26	17.8	27.5
5	Ingredients Only	47.8	3.06	1.32	21.8	24.9
6	Semi-	48.6	3.06	1.17	15.4	28.0
7	Purified	47.6	3.08	1.18	16.4	29.1
8	Diets	51.0	3.02	1.08	17.0	35.4

*Each value based on average of three lots of 13 chicks each representing all three chick sources.

TABLE 5. Comparison of Age and Feed Conversion of Crossbred Male Broilers Used* when 3-lb. Weights were Reached (Trial II)

Chick source	Cross	Age in days	Av. wt., lb.	Feed required/ unit wt.	Average gizzard wt., gm.	Average liver wt., gm.
a	Vantress x Arbor Acre	47.9	3.03	1.32	19.0	29.1
b	Vantress x Arbor Acre	49.7	3.04	1.38	18.9	28.5
c	Vantress x Nichol 108	48.6	3.05	1.36	18.3	26.7

*Each value based on average of seven pens of 13 chicks each which received each of the seven rations.

TABLE 6. Summary of Weekly Weights and Feed Conversions at 6 Weeks* (Trial II)

Ration	Chick source†	Ages in weeks: 1	2	3	4	5	6	Feed required/ unit gain
		Average weight, gm.						
1	A	62	101	157	230	355	493	2.79
	B	62	101	156	231	333	437	3.32
	C	79	126	199	283	408	571	2.75
	Av.						500	2.95
2	A	91	191	351	559	817	1060	1.71
	B	84	184	336	521	757	988	1.86
	C	101	214	381	593	874	1116	1.75
	Av.						1055	1.77
3	A	114	250	428	667	946	1223	1.51
	B	103	225	398	624	893	1141	1.50
	C	113	238	404	615	854	1087	1.68
	Av.						1150	1.56
4	A	109	242	431	665	935	1212	1.20
	B	102	231	422	640	876	1130	1.24
	C	116	259	451	683	917	1155	1.27
	Av.						1166	1.24
5	A	111	225	402	626	872	1151	1.27
	B	106	235	428	666	923	1178	1.27
	C	108	227	403	613	854	1099	1.23
	Av.						1143	1.26
6	A	117	259	450	678	926	1184	1.10
	B	102	225	393	608	835	1035	1.11
	C	117	252	435	663	910	1167	1.22
	Av.						1129	1.14
7	A	108	242	433	653	909	1175	1.16
	B	103	234	401	623	864	1152	1.22
	C	116	246	420	645	897	1150	1.14
	Av.						1159	1.17
8	A	81	184	337	520	752	980	1.03
	B	83	178	343	547	794	1046	1.00
	C	107	216	353	564	817	1044	1.13
	Av.						1023	1.05

*13 day-old male crossbred chicks at start.
†Sources A and B supplied Vantress x Arbor Acre crossbreds, while source C supplied Vantress x Nichol 108 crossbreds.

TABLE 7. Dressing Percentages Obtained as Influenced by Feeds*

Ration series	5-Hour fasted to N.Y. dressed	N.Y. dressed to eviscerated with giblets	Live fasted to eviscerated with giblets	Expressed as % of eviscerated weight: Liver	Gizzard	Giblets
2	90.8	78.4	71.1	3.07	2.25	11.79
3	90.3	78.4	70.5	2.71	2.36	11.24
4	90.1	78.1	70.6	2.85	1.97	10.46
5	90.1	79.4	72.2	2.74	2.40	10.83
6	90.5	78.3	70.8	3.05	1.68	10.43
7	90.8	77.5	70.4	3.12	1.76	11.11
8	89.7	77.2	69.7	3.97	1.91	12.21

*Each value based on 10 broilers from each of three pens.

TABLE 8. Comparison of Dressing Percentages of Crossbred Male Broilers Used* (Trial II)

Chick source	Cross	Dressing percentage: 5-Hour fasted to N.Y. dressed	N.Y. dressed to eviscerated	Fasted to eviscerated without giblets
A	Vantress x Arbor Acre	90.5	70.4	63.6
B	Vantress x Arbor Acre	90.3	70.1	63.3
C	Vantress x Nichol 108	90.2	70.9	64.1

*Each value based on average of seven pens of 10 broilers each which received each of the seven rations.

TABLE 9. Calculated Consumption of Calories and Protein with Different Rations at 3-lb. Average Body Weights (Trials I and II)*

Ration series	Trial No.	Av. wt., lb.	Age, days	Intake per lb. of broiler: Total feed (F/W)	Calories of prod. energy	Crude protein, gm
		MODIFIED 1912 FEED				
R1	1	3.02	78.	3.03	2300	209
		1958 LOW-FAT COMMERCIAL BROILER RATION				
R2	2	3.03	51.4	1.86	1868	202
		MODIFIED 1958 HIGH-FAT COMMERCIAL FEED				
R3	2	3.01	47.5	1.61	1934	181
		1958 SPECIAL FEEDS (PRACTICAL INGREDIENTS ONLY)				
R2	1	2.98	47.75	1.36	1941	194
R4	2	3.02	47.2	1.26	1818	184
Av.		3.00	47.5	1.32	1880	189
R4	1	3.02	45.5	1.33	1654	172
R2	2	3.06	47.8	1.32	1696	177
Av.		3.04	46.6	1.32	1675	174
		1958 SPECIAL FEEDS (SEMI-PURIFIED DIETS)				
R7	1	3.01	46.5	1.15	1915	206
R6	2	3.06	48.6	1.17	1960	216
Av.		3.04	47.5	1.16	1937	211
R8	1	3.02	44.0	1.15	1765	190
R7	2	3.08	47.6	1.18	1844	219
Av.		3.05	45.8	1.16	1804	204
R10	1	3.00	47.75	1.11	1934	177
R8	2	3.02	51.0	1.08	2028	175
Av.		3.01	49.9	1.09	1982	176

*One lot of nine Vantress x Arbor Acre male crossbred chicks used per ration in Trial I. Three lots of 13 Vantress x Arbor Acre or Vantress x Nichol 108 crossbred chicks used per ration in Trial II.

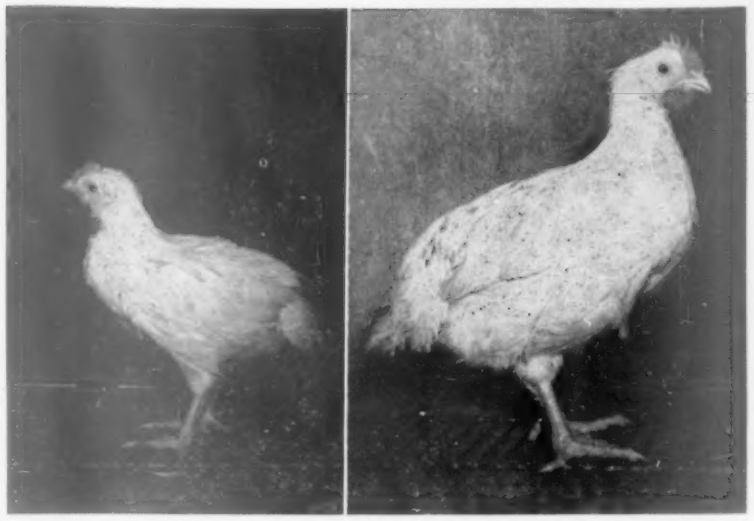

FIG. 1.—Both broilers are 44 days of age. One on left was fed modified 1912 ration and weighs 1.14 lb. The one on the right received a 1958 special ration and weighs 3.02 lb.

that the gizzard weights of the broilers fed diet R5 (pelleted) are comparable to those of ration R3, also pelleted, even though it was appreciably more potent. This suggests the possibility that pelleted feeds may lead to larger gizzard size. Less difference was observed between average liver size although the groups which were fed the diets extremely high in fat had heavier livers.

In Table 5 the results obtained with each of the seven rations used (excluding the modified 1912 feed) were combined by source of chicks for comparison. The results are surprisingly close as to time required to reach 3-lb. average weights as well as feed conversion, gizzard weights and liver weights.

Since the previous data given have referred to results at the time each pen averaged 3-lb. body weight, the results at six weeks of age are shown in Table 6. This permits one to compare growth rate and feed conversions at the same age. The very great difference in growth rate between the 1958 commercial and special ration feeds as compared with the modified 1912 feed is most evident. Feed conversions are also markedly different. These differences are due entirely to the feeds since the environment and breeding were comparable for each of the rations fed.

Two to three days after each group reached 3-lb. average weights, the broilers were dressed and dressing percentages determined. At the time of this writing the three groups fed the modified 1912 feed had not reached 3-lb. average weights (11 wks.). The results obtained are shown in Table 7. Except for the difference in liver and gizzard weights previously cited, there appeared to be little difference in over-all dressing percentage as influenced by diet. From results obtained in Trial 1, however, there was a greater loss during the five-hour fasting period when the high-fiber, low-energy modified 1912 feed was fed, than when the 1958 special feeds were used. Also there was a marked difference in the conformation of the broilers fed the modified 1912 and the 1958 feeds at the time each reached 3-lb. weights. Of course, those fed the 1912 ration were appreciably older (78 days), but their carcasses were much longer and less well finished with prominent breasts. Their body shape was triangular, while those fed the 1958 rations approached more nearly the rectangular shape. Prior to killing the live birds reared on the modified 1912 feed appeared to weigh approximately 50% more than those fed the 1958 rations even though they actually were the same weight.

A comparison of dressing percentages by chick source is given in Table 8.

Comparisons Shown

Comparisons involving birds reared on the modified 1912 rations (Trial 1) and one of the 1958 special rations are shown in Figs. 1-5. Figure 1 depicts marked difference in size at the time the birds fed the 1958 ration reached 3-lb. average weight (44 days). Fig. 2 portrays the marked difference in the length and body conformation of the birds fed the two different rations at the time 3-lb. weights were reached. Fig. 3 shows the difference in size of dressed birds obtained at 44 days of age. Fig. 4 shows the very marked difference in size of the gizzards, with those from birds receiving the modified 1912 high-fiber feed almost twice as large as the gizzards from the high-fat fed broilers. Incidentally, no differences were observed in the length of the intestinal tracts, although after fasting the intestinal tracts of the

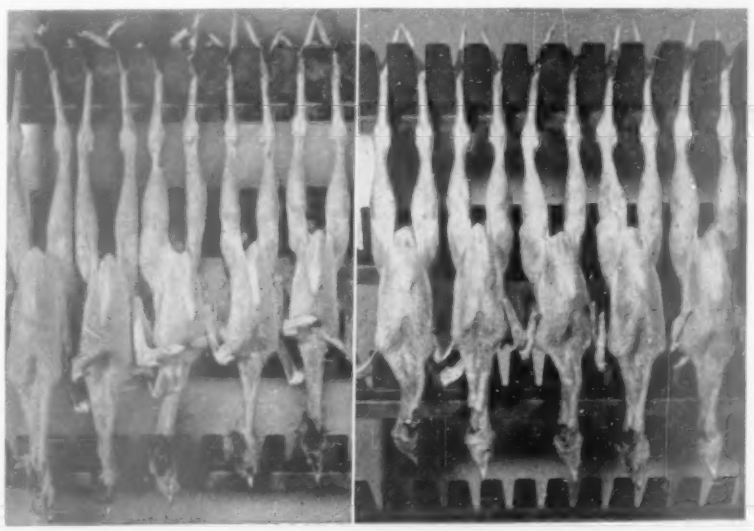

FIG. 2.—New York dressed carcasses from modified 1912 ration (left) and 1958 special ration (right) at 3-lb. live weights. Note difference in length, conformation, and keels.

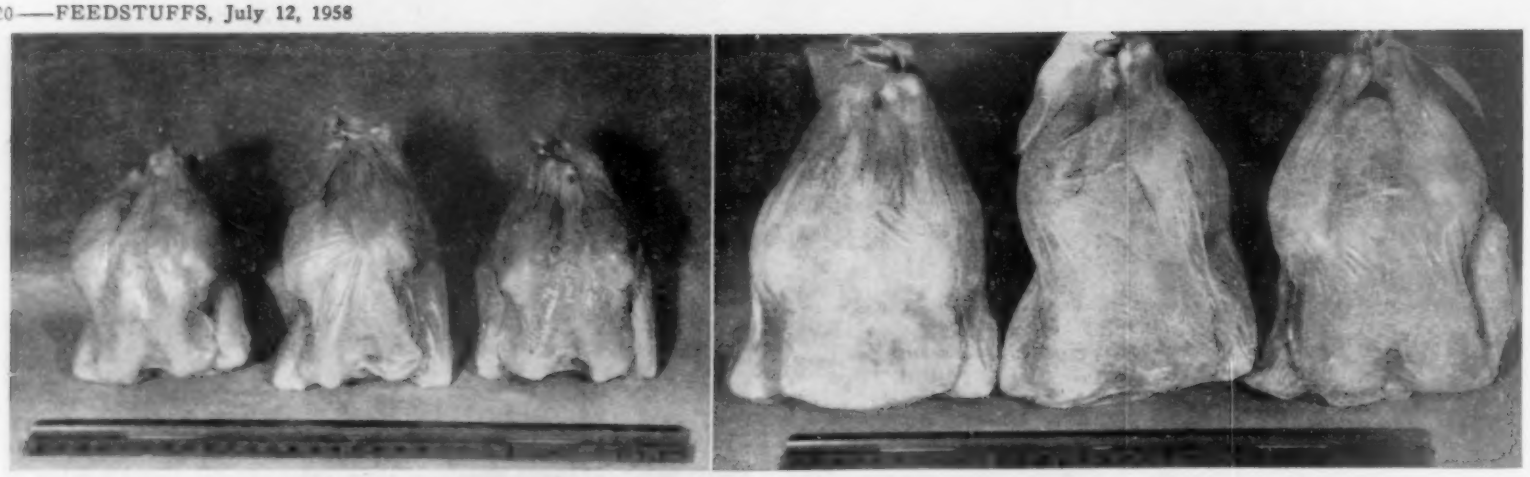

FIG. 3.—Dressed broilers at 45 days of age. Those on the left weighed an average of .71 lb. (modified 1912 feed), and those on the right averaged 2.16 lb. (1958 special feed).

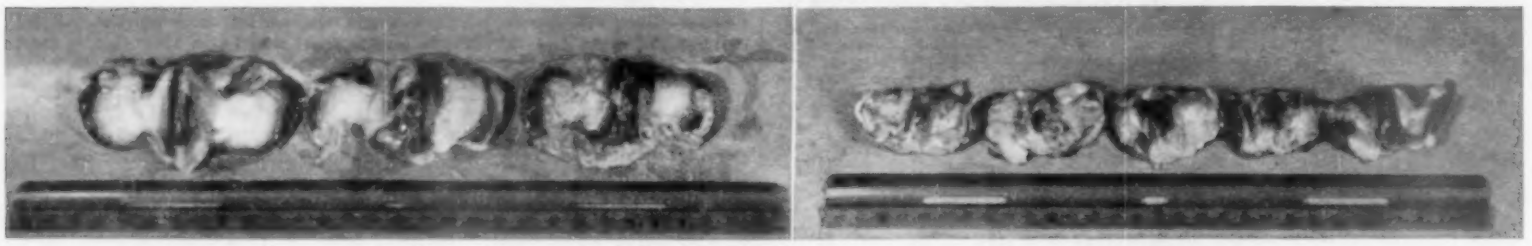

FIG. 4.—Gizzards from 3-lb. broilers fed modified 1912 feed were almost twice as big as those from broilers reared on the 1958 special feeds. The gizzards from the birds on the 1912 feed are on the left above.

birds fed the special 1958 high fat rations appeared to be slightly smaller in diameter. No direct measurements, however, were taken. Figure 5 shows the marked difference in body cavity occupied by the digestive tract as a result of feeding these widely different feeds.

The last picture, Fig. 6, was taken by one of the staff of Feedstuffs magazine in Chicago, showing that portion of the exhibit depicting amounts of feed required to raise 3-lb. broilers. These flasks contain the actual weighed amounts of feed used in the first trial to produce a 3-lb. broiler. The labels on each of the flasks represent conversions obtained in terms of per pound of feed per pound of broiler. The values for the modified 1912 rations and 1958 commercial rations referred to results obtained in Trial 1. The remainder refer to results obtained in Trial 2, with the exception of the 1.02 conversion which should have been 1.04 as was indicated in the presentation at Chicago. The 1.02 represented an extrapolated value as the test was not completed until the morning of the day of the presentation.

Leads for Further Study

It is obviously of interest to demonstrate efficiency with rapidly growing male broilers, without consideration of costs or physical problems which might be encountered if such feeds were to be used. In spite of the fact that even those 1958 special feeds which are composed only of practical ingredients would appear to be impractical, these results suggest various leads for further study.

It is not surprising, of course, that gizzard size would be affected by potency (fat level) of the diet. Such a marked contrast in capacity, however, might have an effect on the feed consumption if birds were shifted from one feed to another with a greatly different potency.

The mere fact that rations containing 40 to 50% fat were used with reasonable success is noteworthy; in fact the only carbohydrate source in some of these formulas was the glycerol in the fat and that part of the protein which was oxidized and converted into carbohydrate intermediates.

Numerically better conversion in terms of pounds of feed per pound of chicken likewise is only to be expected if feeds are increased in potency and at the same time maintained adequate in supportive nutrients.

Energy and Protein Utilization

In order to compare more realistically the difference in performance from the standpoint of energy and protein utilization, the actual uptake of Calories of productive energy per pound of broiler and grams of protein consumed per pound of broiler are shown in Table 9. This table includes some of the feeds used in both trials 1 and 2. Although there were slight changes made between trials, the basic formulas were quite similar. The average values for each of these include a total of four lots of broilers. Generally there is excellent agreement in performance between the two trials.

Although there is a marked difference in feed conversion, there is much less difference in the Calories required per pound of bird when the 1958 commercial broiler feed was used as compared with the 1958 special rations. In fact, the nutritional conversions shown by the modified 1912 feed in Trial 1 were fairly good. No doubt this is much better than would have been obtained with the strains and management conditions used in 1912. Also, the modifications made in this 1912 feed made it more nearly comparable to formulas used around 1930.

From the data shown in Table 9, it would appear that the formulas containing highest levels of fat showed poorer utilization of Calories since rations containing approximately 20% added fat did somewhat better than those containing approximately 30% added fat. Of noteworthy significance is the very excellent efficiency shown with diet 4 in Trial 1 and R5 in Trial 2. This was basically a pelleted ration containing 20% added fat with otherwise practical ingredients. This ration produced a pound of broiler with an average of only 1,675 Calories and 174 grams of dietary protein.

The efficiency of protein utilization shown by some of the 1958 special rations also is noteworthy since it was appreciably better than that obtained with the 1958 commercial rations.

Another factor becomes evident in looking at results obtained with rap-

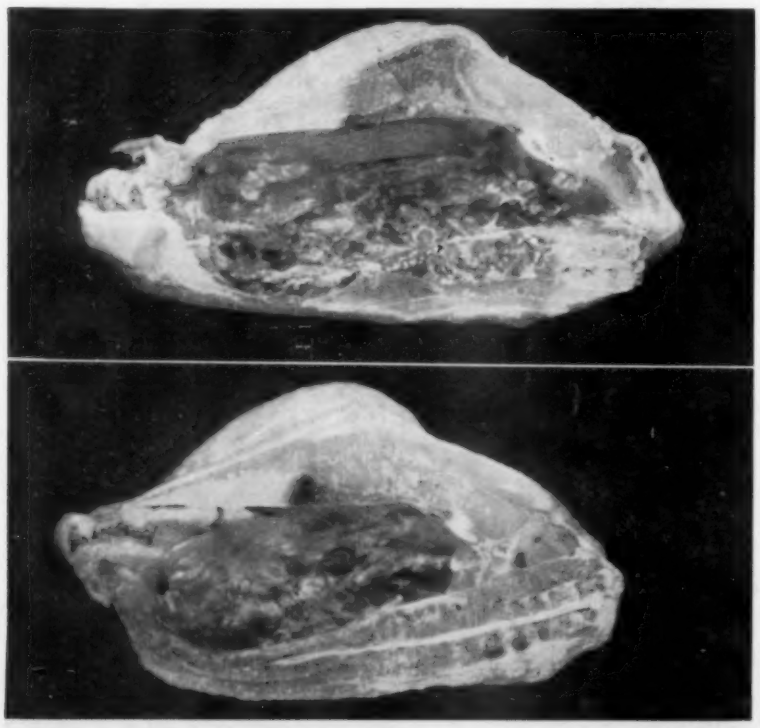

FIG. 5.—Cross section of broilers. Note the much larger body cavity of broiler fed old-style feed (top) as compared with that of broiler fed 1958 special ration.

FIG. 6.—Differences in amounts of feed required to produce 3-lb. broilers and feed conversions displayed. The "1.02" conversion should read "1.04."

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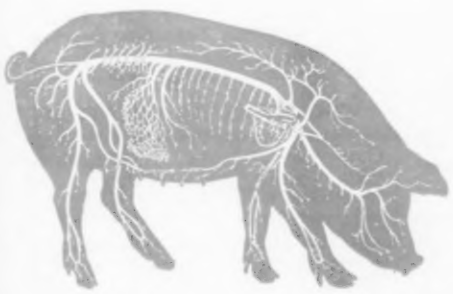

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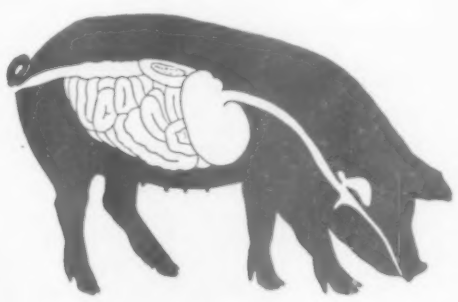

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Feed continuously to stimulate growth, improve feed efficiency, increase feed intake and promote better uniformity of gains.

MEDIUM LEVEL—50 Gm./ton (37.5 Gm. streptomycin sulfate—12.5 Gm. procaine penicillin)

Feed continuously until pigs are 50 to 75 pounds to: prevent bacterial swine enteritis; stimulate growth; improve feed efficiency; stimulate feed intake; and help promote better uniformity of gains. If outbreaks of enteritis occur, feeds containing 100 Gm. of PRO-STREP should be used.

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idly growing male broilers. Our present method of feeding broilers deals with mixed sexes and perhaps we are either not feeding the males sufficiently well or are over-fortifying our rations (particularly in protein) in terms of the requirement for females. In practical formulation, increasing the protein level almost invariably results in reduced energy potency of the ration. It seems possible that more rapid growth might be obtained if the males were reared separately and fed appropriately formulated rations while females might grow as rapidly as they do at present with less protein but a more potent formula. This would result in relatively improved feed conversions and a reduction in feed cost per pound of broiler. Whether or not this would justify separate feeds and rearing cannot be determined as data are unavailable to quantitate these effects. Most of the work done on separate rearing of sexes has not involved specially designed formulas.

Food Industry Groups Back Midwest Plan To Hold Food-A-Rama

KANSAS CITY—Plans of the Midwest Feed Manufacturers Assn. to spotlight consumption of meat, milk and eggs at the MFMA convention in February won enthusiastic response from representatives of several national food product associations at a planning session here, the association reported this week.

Shifted from Houston to Kansas City, the convention will be held Feb. 16-18 at the Muehlebach Hotel.

At the preliminary planning meeting, the food product association representatives explored ways of promoting consumption of the foods of animal agriculture in connection with the convention.

The aim is to build a program that will attract national attention to the importance of these foods as basic health foods, and also point out the vital part the formula feed industry plays in producing these quality products efficiently, and in marketing them effectively.

Another planning session is scheduled for the Carter Hotel in Cleveland.

MAKE FOOD-A-RAMA PLANS—Representatives of a number of national food product associations met in Kansas City recently to explore ways of promoting consumption of the food products of animal agriculture in conjunction with the Midwest Feed Manufacturers Assn. convention in February. Pictured clockwise around the table, starting in the left foreground, are Vern Schwaegerle, American Meat Institute, Chicago; Lou Walts, National Turkey Federation, Chicago; Lloyd S. Larson, executive vice president, MFMA, Kansas City; Dick O'Connell, National Commodity Organization for Eggs, Kansas City; Harold Williams, Institute of American Poultry Industries, Chicago; Lorne Van Stone, Uncle Johnny Mills, Houston, Texas, MFMA convention program chairman; E. Y. Lingle, National Independent Meat Packers Assn., St. Joseph, Mo.; Herb Alp, American Farm Bureau Federation, Chicago; Nels Post, National Milk Producers Assn., Washington; Martin E. Newell, Feedstuffs, Kansas City, and Frank Fraser, National Broiler Council, Richmond, Va.

Program Announced For Ohio Sheep Day

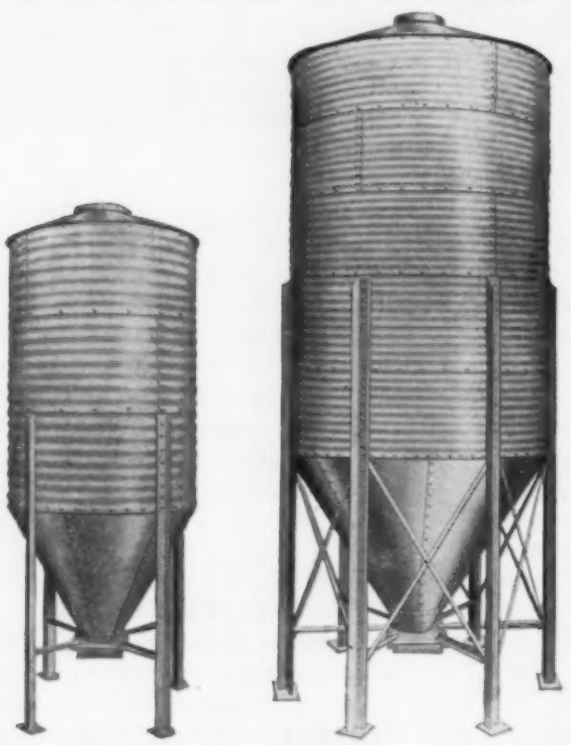
WOOSTER, OHIO — The annual Ohio Sheep Day, a program held for the benefit of sheep and wool growers and for those who may contemplate adding sheep to their farm enterprise, will be held July 25 at the sheep research farm of the Ohio Agricultural Experiment Station here.

This year, in addition to reports on the results of research, special attention will be given on the forenoon program to sheep diseases. Dr. H. E. Goldstein, diagnostic laboratory, Reynoldsburg, Ohio, and Dr. J. B. Smith, Ohio Department of Agriculture, Columbus, will lead in the demonstrations and discussions.

Feature speaker of the program will be Jerry Sotola, livestock bureau, Armour & Co., Chicago, who will discuss the trends and outlook in the sheep industry. Other subjects to be discussed include a talk on the influence of plant estrogens on the reproductive function in sheep and fundamental factors in sheep production. A program for ladies has also been planned.

WINDS DAMAGE ELEVATOR

OKLAHOMA CITY — Farmers Cooperative Elevator, Kingfisher, Okla., recently was severely damaged by storms which blew in a wall and damaged the roof causing loss to stored feed, seed and fertilizer. Losses were estimated to be from $10,000 to $15,000.



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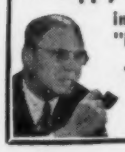

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Well Displayed Variety of Merchandise Builds Sales for New York Feed Store

By Al P. Nelson
Feedstuffs Special Writer

Feed is the principal item in stock at the G.L.F. store at Owego, N.Y., as it is in other stores of this group throughout the state, but many other well displayed farm supplies do their share toward building a large annual volume. The Owego store, under the managership of Herbert Bean, uses both outdoor and indoor display to get the extra sales, and the policy is quite successful.

For instance, in the large display room, one can find a neat and sizeable showing of garden and lawn tools. Both farmers and townspeople come here to buy such items, for they say they like the large stock from which to select. Also, as Mr. Bean points out, the farmer who comes to buy a special pitchfork or shovel, may also buy feed and other supplies. Thus, every traffic-building item has plus value, he reports.

Dog food, rabbit pellets and other feeds are displayed on wall shelves with price markings. While the store is not strictly self-service, there are many items which the customer can pick up and bring to a wrap counter. Also, when farmers wait to get their feed needs filled, they like to browse around the big salesroom, and when articles are plainly price-marked this encourages impulse buying, according to Mr. Bean.

Copies Retail Stores

"We try to make our displays as clean, effective and appealing as other types of retail stores," declares Mr. Bean, "and this really attracts customers."

An idea of the feed volume of the Owego store can be gained from the fact that 14 men are employed, and that a great deal of grinding and mixing are done. The largest percentage of business is in dairy feeds, for the store is located in an excellent dairy region, and New York farmers are known for their excellent feeding practices. They are always anxious to discuss better feeding practices with him and other qualified feed men, he says.

The average dairy herd here may run up to 50 head, states Mr. Bean, of which number perhaps 20 to 30 are milking regularly. Farmers in the region grow a lot of oats, wheat and corn, which they use in their feed program. Other dairy farmers are forced to buy considerable grain during certain periods of the year.

Bulk Delivery

Four years ago, the Owego store of the G.L.F. purchased a bulk delivery truck. It now handles about 3,000 tons a year on the bulk delivery basis, and Mr. Bean expects this total to grow in the coming year. Most of the farmers who want bulk delivery are building their own bins for storage of the feed, rather than purchasing ready-made bins.

With the addition of the bulk truck, the Owego store now has five trucks in use.

The layout of the Owego store is very conducive to serving may customers at one time, especially those who have grinding and mixing to be done. The building is about 40 ft. wide and 150 ft. long, with a lengthy loading platform and several warehouse entrances. It is not unusual for 10 farm trucks to be lined up at the loading platforms for service of one kind or another.

The organization has one sales and serviceman who visits customers throughout a wide area, talking better feeding, crop management, disease control and similar topics. Farmers appreciate this kind of service, and it is one reason why G.L.F. gets a large farm trade from both members and non-members.

"We try to be alert to every feed and related need the farmer may have," says Mr. Bean, "and we believe in getting these items on display for him to see time and again when he enters this store."

More Grain Storage Space Needed in Iowa

DES MOINES — A shortage of grain storage space in Iowa was reported by Robert Skinner, executive secretary of the Western Grain & Feed Assn., Des Moines.

He said Iowa is short about 26 million bushels in storage capacity for take-over corn, and that coupled with this shortage is the fact that it appears certain there will be several million bushels of soybeans which will not have moved out and may have to be stored.

Ray Pollock, director of the grain branch of the U.S. Department of Agriculture, and his deputy, Robert Hansen, met recently with state ASC officials and representatives of the grain trade in Iowa to discuss the storage problem.

Mr. Skinner said the Washington officials want any necessary additional storage facilities to be built by the grain trade rather than by the government. Commercial storage bins will be filled before government bins are used. He urged association members not to build additional storage if it is not needed, and to check with local county ASC offices for guidance in making any decisions to build.

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ANNUAL PULLET REPLACEMENT FIGURES		
If percentage of hens lost through culling and mortality is:	In order to house this number of pullet replacements per 1000 chicks:	You will need to start this number of chicks:
30	300	430
35	350	501
40	400	572
45	450	644
50	500	715
55	550	786
60	600	858
65	650	929
70	700	1,000
75	750	1,072
80	800	1,144
85	850	1,216
90	900	1,287
95	950	1,359
100	1,000	1,430
110	1,100	1,573
120	1,200	1,716

NOTE: If straight-run chicks are used, double the figures in the right hand column. If the incidence of mortality is lower than expected, surplus pullets may be sold off as ready-to-lay pullets, or dressed out. Some poultrymen will profit from the housing of extra pullets in temporary quarters. These may be used as a reserve to replace any birds lost as a result of early mortality or culling during the first few months of production.

DAILY FEED CONSUMPTION TABLE (per 100 layers)		
Percentage of Birds in Production	Total Daily Feed Consumption	
	Heavy Breeds	Leghorns
50	28-29 lb.	24-25 lb.
60	29-30 lb.	25-26 lb.
70	30-31 lb.	26-27 lb.
80	31-32 lb.	27-28 lb.

COMPARISON OF LAYER WEIGHT AND FEED CONSUMPTION			
Hen Weight (Lb.)	Maintenance Only (Lb.)	Feed Maintenance and 250 Eggs (Lb.)	Per Dozen Eggs (Lb.)
3.5	52	88.0	4.2
4.0	57	92.0	4.4
4.5	61	96.5	4.6
5.0	65	101.0	4.8
5.5	70	105.0	5.0
6.0	74	109.0	5.2

NOTE: A 4 lb. hen will consume approximately 57 lb. of feed per year, for maintenance purposes only. Heavy hens consume an additional 8 or 9 lb. of feed for each extra lb. of weight. Beyond the requirements for basic body needs, each dozen eggs is produced on $1^2/_3$ lb. of feed, regardless of body weight or rate of lay.

FEED CONSUMED PER DOZEN EGGS		
No. of Eggs per Year	Total Feed Consumed (Approximate)	Lb. of Feed per Dozen Eggs
120	75 lb.	7.5
160	80 lb.	6.0
200	86 lb.	5.2
250	93 lb.	4.5

Prepared for members of the feed and poultry industries in the interests of better poultry health and nutrition. Copies of this and others in the series of Service Bulletins are available on request. Merck & Co., Inc., Chemical Division, Rahway, New Jersey.

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LAYING RATIONS

Compare the recommended levels of B vitamins at right with those you are formulating in your layer feeds. If your feeds look low on essential B vitamins consider this fact: consumption of high-energy, low-vitamin feedstuffs like corn and fats results in lower feed intake. This means that your high-energy feeds must have more nutrients per pound of ration to support maximum egg production.

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Vitamin	Total recommended levels (Gm./ton) Layer	Breeder
Riboflavin	**4**	**5**
Calcium Pantothenate	**12**	**14**
Niacin	**25**	**25**
Choline Chloride	**1000**	**1200**
Vitamin B_{12}	**3.0** (mg./ton)	**6** (mg./ton)

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THE BORDEN COMPANY
nutrition research laboratory and test farm
ELGIN, ILLINOIS

Test No. B25819-C

Product tested: Borden's MG 2X-400
Type of test: Broiler Report
Conditions: Floor pens
Chicks: Indian River Crosses
No. of chicks per pen: 100 (50 males, 50 females)
Length of test: Eight weeks, 2 days

Pen No.	Diet	Weight Av. Lbs.	Feed Conversion
1.	Basal*	3.22	2.09
2.	Basal + 1.25% MG 2X-400 less 2% fish meal and less 2% distillers solubles	3.11	2.09
3.	Basal + 1.25% MG 2X-400 less 3% fish meal and less 2% distillers dried solubles	3.03	2.10

Note that use of MG 2X-400 in the formula permits substantial reduction in ingredient costs.

*Commercial-type ra
meat scraps, fish
meal, poultry by-p

THE BORDEN COMPANY
nutrition research laboratory and test farm
ELGIN ILLINOIS

Test No. B25819-B

Product tested: Borden's FERMACTO 400
Type of test: Broiler Report
Conditions: Floor pens
Chicks: Indian River Crosses
No. of chicks per pen: 100 (50 males, 50 females)
Length of test: Eight weeks, 2 days

Pen No.	Diet	Weight Av. Lbs.	Feed Conversion
1.	Basal*	3.22	2.09
2.	Basal + 0.5% FERMACTO 400 less 2% fish meal	3.17	2.07
3.	Basal + 0.5% FERMACTO 400 less 3% fish meal	3.15	2.10
4.	Basal + 0.5% FERMACTO 400 less 2% fish meal, less 1.25% meat scraps, less 1.25% poultry by-product meal	3.01	2.09

The use of FERMACTO 400 in the formula improves feed efficiency and reduces ingredient costs.

*Commercial-type ration, containing meat scraps, fish meal, feather meal, poultry by-product meal, etc.

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BETTER FEEDS THROUGH RESEARCH

Kansas Plant Doubles Rate of Output and Reduces Crew—Result Is Tripled Efficiency

By ROGER BERGLUND
Feedstuffs Managing Editor

When a feed plant doubles its hourly production and at the same time reduces its crew from 17 workmen to 10, it has made some real progress.

When a plant cuts production manhours per ton from more than 3 to 1 or less, while at the same time improving service to customers, it has recorded a sharp gain in efficiency.

Well, that is just what has been done by Naturich Mills, a feed manufacturing company at Abilene, Kansas.

How was it done? For one thing, the firm has put some analysis, some planning, some perspiration and about $50,000 into a program of mill modernization and improvement. Also important have been improvements in production and work scheduling

Jack Grubb (right), manager of Naturich Mills, and Dean Widler, office manager and in charge of production, compare their plant operations with some of the industry time standards reported at the Midwest Feed Production School.

and supervision of workers — plus record keeping and constant attention to labor costs and opportunities to step up productivity. As guides in making cost-cutting changes and operational improvements, the Naturich management has used labor cost standards and time study data from the annual Midwest Feed Production Schools.

Naturich Mills, formerly called Midwest Mills, is a division of the Security Milling Co. of Abilene—of which T. L. Welsh is president and Thomas W. Welsh is vice president. The firm's feed mill burned in 1952 and then was rebuilt in 1953. The recent plant and operational improvements have been made during the past year and a half or so.

Responsible for the steps taken to boost efficiency have been Thomas Welsh; Jack Grubb, Naturich manager; Dean Widler, office manager and in charge of production, and Ray Rider, mill superintendent.

Responsible for seeing that the increased output is sold is Al Green, sales manager.

The company serves the state of Kansas and parts of Nebraska, Colorado and Oklahoma. A complete line of poultry and livestock feed is manufactured, with poultry accounting for some 70% of the production. An increase in swine feed business is expected, with more milo in the region bringing greater interest in hog raising.

The poultry feed business includes some turkey feed. In that connection, it may be noted that Naturich also has a turkey processing plant at Newton, Kansas, which turns out birds under the same Naturich brand name.

All feed goes out to dealers in the area in company-owned trucks.

Batch Plant

The plant, a batch mixing operation, turns out from 75 to 80 tons of feed per eight-hour shift. Currently, some 15% of the tonnage goes out in bulk. About 80% of the ingredient tonnage is received and handled in bulk, with the rest in bags.

The Security Milling Co.'s flour mill laboratory is used by the feed plant in quality control.

Adjacent to the feed mill are concrete grain storage tanks, the elevator being used in the company's grain operations. The man working in the elevator also is responsible for bulk ingredient receiving and grinding in the feed mill.

Following is a general description of the plant and its operation, and outlined thereafter are the measures taken to hike efficiency and the results:

The feed plant building is a four-story concrete structure. The building includes eight bulk ingredient bins, holding a total of 200 tons of millfeed, soybean meal, grains and alfalfa meal. Other ingredients are in sacks. Molasses is stored in a concrete tank holding two carloads. Recently added to the mill were nine outside tanks for storage and loading out of bulk feed.

Adjacent to the mill building is a two-story warehouse, 36 by 220 ft. The packing room is on the first floor, and bagged ingredients are stored on the first floor. The second floor holds sacked finished feed. Sacked ingredients are put on pallets and are moved in the warehouse and to the dump sink over the mixer by forklift truck.

This is a view of the Naturich Mills plant in Abilene. In the left foreground is part of the two-story warehouse for sacked materials. To the left, out of the picture, is a new truck dock at the end of the warehouse. Adjacent to the warehouse is the four-story mill building. In the background is a wheat elevator used in the firm's grain operations. To the right of the mill is the office building.

Bulk ingredients come in by rail and truck and are unloaded by power shovel and truck hoist. Grain is ground on a 75 h.p. Big Chief hammermill, with 20 h.p. on the fan, in the basement. Mixing is done in a Hayes & Stolz horizontal batch mixer in 3-ton batches, with the batching and mixing controlled from a first-floor control center. A manual push-button system is used with the bulk ingredients, with screw feeders moving the materials to the central scale hopper.

Mixed mash is elevated to a reel and goes by screw conveyor, over magnets, into bins over the pellet mills or molasses mixer or into packing bins. The distribution system is on the third floor.

The molasses operation, on the second floor, includes a Wenger high-molasses pellet system. After the pellets are packed, they are hand-trucked into the second floor warehouse area.

Hard pellets are made on two California Century 75 h.p. mills and are cooled in two vertical coolers before being elevated to third floor shakers. There are two rolls for crumblizing. Pellets and crumbles, after going through gyrosifters, are moved by conveyor belts to any of the nine 9-ton packing bins in the mill building.

Finished Feed Handling

There are air slides on the packing bins, and feed to be packed is moved by conveyor belt, with variable speed drive, to the Richardson single-bucket packer in the warehouse. All of this operation is controlled by the man doing the packing.

Bags of finished feed go by inclined belt conveyor up to the second floor warehouse, where a belt, down the center, extends the length of the warehouse. Bags are either stored or go directly on the belt to a chute leading down to a belt between two truck stations in the covered loading dock at the end of the warehouse.

Thomas Welsh (left) is vice president of the Security Milling Co., Abilene, parent firm of Naturich Mills. He and Al Green (right), Naturich sales manager, look over sales literature promoting one of the company's complete lines of poultry and livestock feeds. Mr. Welsh has worked with the Naturich executives in modernizing feed mill operations.

Bags are taken off the belt running alongside the open truck box or trailer, so no conveying equipment into the truck is used. An intercom system between the packer man and the men loading out is used to control movement of bagged feed to the dock.

In addition to the other storage bins for finished feed, there is a 5-ton bin for bulk mash which may be spouted out to trucks or conveyed to the packer.

Pellets and crumbles going into the outside bulk bins are moved by belt to a rotating distributing head over the tanks. Conveying and storage equipment in the mill was provided by the Ehrsam company, located at nearby Enterprise, Kansas.

Improvements Made

Until about a year ago, there were 17 workmen in the plant and feed was being made at a rate of about 5 tons per hour. The Naturich manage-

As illustrated in the first photo, the biggest manpower saving came in the installation of a new automatic packer, a Richardson single-bucket unit, replacing manual scales. A belt conveyor, shown in the second picture, extends the length of the second floor warehouse. An inclined belt, on the left, carries bags from the packer up to the second floor. Feed is warehoused or goes directly on the belt to a chute leading down to a belt between two trailer stations in the covered loading dock. The third picture shows the belt between the two trailer stations. A workman loads the bags directly onto the vehicle.

Ray Rider, mill superintendent, is shown at the manual push-button control system used in batching and mixing. In back of him are lights and controls for all machinery in the plant. Mr. Rider and his crew carried out most of the mill improvement program.

ment recognized that improvements were needed, and this was confirmed when labor cost standards for feed mills were reported at the 1956 Mid-west Feed Production School. Among those attending the recent schools have been Thomas Welsh, Mr. Widler and Mr. Rider. The school and a subsequent analysis of the plant operations showed that the mill was not meeting the standards.

Armed with this information, the Naturich people set about the task of improving and modernizing their operations. Most of the work has been done by company personnel.

The 17 men in the mill previously, turning out feed at a rate of more than 3 man-hours per ton, included three men in the mill (mixing and pelleting), two on the molasses operation, the equivalent of 1½ in the elevator (including receiving bulk ingredients), 3½ men packing with manual bagging scales, six in the warehouse and one on maintenance.

Now, after the changes of the past year, there are only 10 workmen—one man in the elevator, two in the mill (mixing, grinding, pelleting, distributing), one packing, one on molasses operations, four in the warehouse and one on maintenance.

The plant now produces 10 to 11 tons of feed per hour, and man-hours per ton have been cut to 1 or less. This labor includes everything but the superintendent.

Several Steps Taken

What was done to cut the labor man-hours per ton down to the comparable size mill standard of less than 1? Actually, explained Mr. Widler, a number of things added up to the improvement that has been made:

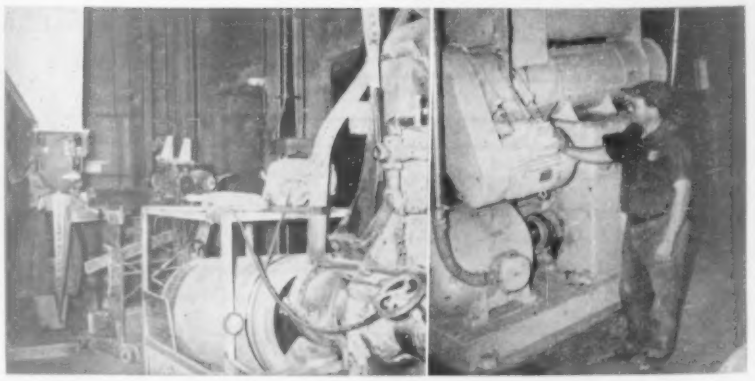
1. The company began using a power shovel to unload bulk ingredients, cutting the time to unload a car to 1½ hours and saving ½ man-day work. Previously scoop shovels had been used.

2. There had been two men on the molasses pelleting operation, one man running the unit on the second floor and another on the first floor packing the feed. Also, the operation was geared to slower cooling than at present.

Now one man runs the entire system. The pellets go through the one horizontal cooler and then are elevated to a vertical cooler on the second floor which was added recently to increase cooling. The operator packs the feed on the same floor and hand-trucks it to the second floor finished feed warehouse. Further improvement in capacity is planned by bringing in cold air from the outside in the winter for cooling.

3. More efficient mill operation has reduced from three to two the number of men on the first floor who handle the mixing and pelleting.

4. A new California pellet mill was installed, replacing an older, smaller unit. This provided two 6-ton-per-hour mills.



The first picture shows part of the Wenger high-molasses pellet operation, including the mill and packing bin. Addition and rearrangement of facilities reduced manpower needed in this operation. In the second picture, one of the workmen is at a new California pellet mill, installed to replace an older unit and step up capacity. A companion 75 h.p. unit also is part of the pelleting operation.

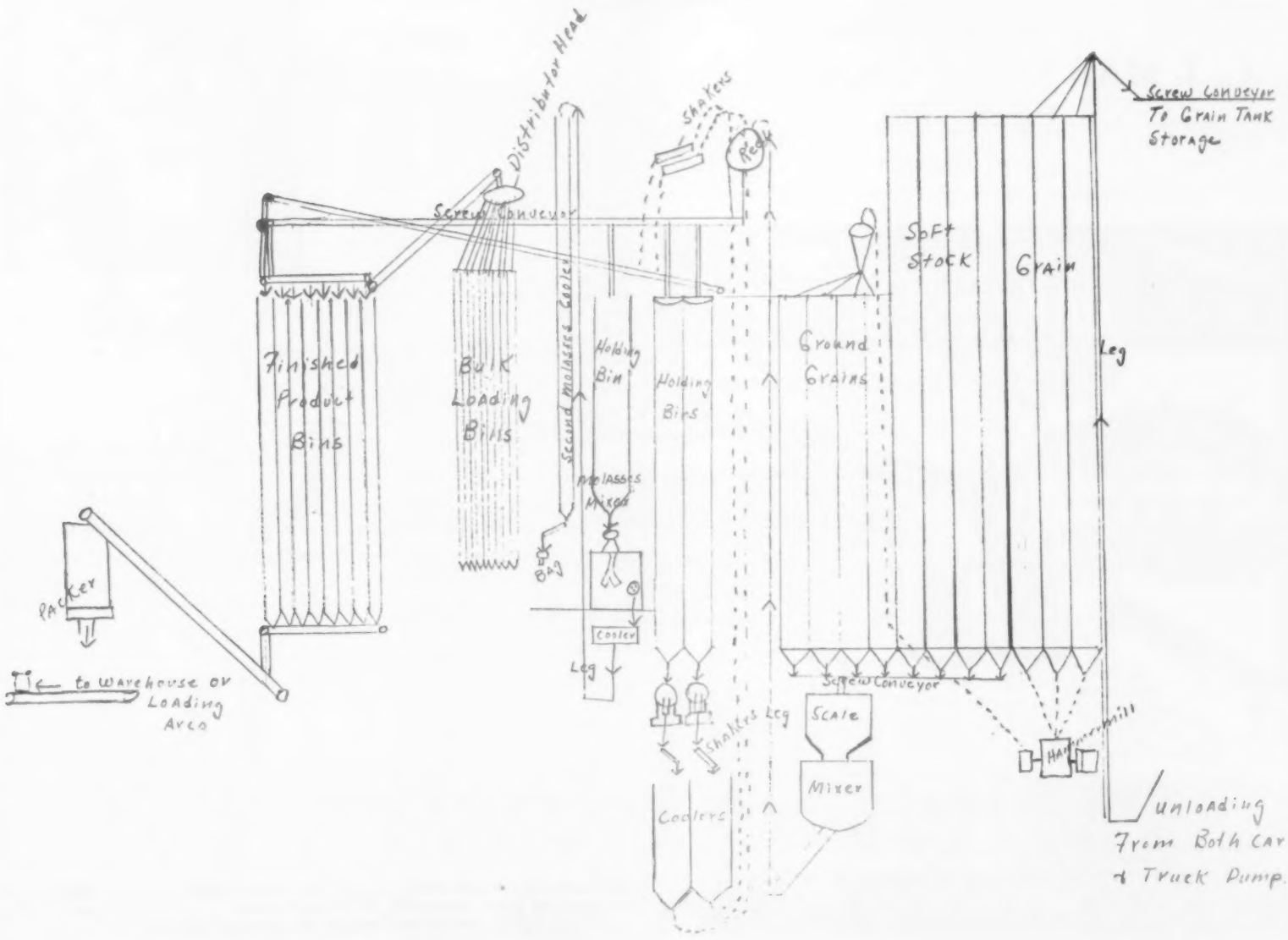
5. Formerly all sacked ingredients on the first floor of the warehouse were moved by hand truck. Now the bags are palletized and handled by fork truck. This has speeded handling; also, by use of pallets and higher stacking, storage capacity has been almost doubled. The first floor has space for 400 tons of material.

There were the equivalent of 4½ men in the first floor warehouse. Now there are three, handling the bagged ingredients, loading out finished feed and moving sacked ingredients to the mixer. The warehouse crew also is responsible for loading out bulk feed.

The second floor warehouse was requiring the equivalent of 1½ men. Now, through better scheduling and more movement of feed directly from the packer to the truck dock by way of the second floor belt, only one man is required on the second floor. Also, feed can be packed faster. Still further improvement is planned by revamping runs and loading schedules

One of the recent improvements is the use of pallets and a forklift truck to handle bagged ingredients in the first floor warehouse area.

Simplified Flow Diagram



Weekly Labor Productivity Report for Week of

	Bulk Receiving	Manufacture	Packing	Molasses
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Total Tons		Total Tons	Total Tons	Total Tons
÷ by Elec M/H		— Prod M/H	— Packing M/H	Blending M/H
M/H Per Ton		M/H Per Ton	M/H Per Ton	M/H Per Ton

Manufacture Tons	
M/H ÷ Sweeping	
M/H Per Ton	

Manufacture Tons	
M/H ÷ Maintenance	
M/H Per Ton	

Warehouse

Shipments	Bags Received	
A Tons	B Tons	Total Tons
B Tons	Monday W/H inventory	
	— Last day ending	
C Tons	difference (c)	
	Total Tons Handled	
	÷ W/H ÷ M/H	
	M/H Per Ton	

A weekly labor productivity report, shown here, is prepared from daily records. This report shows man-hours per ton in each department of Naturich Mills' plant at Abilene, Kansas.

to get more movement of feed directly from the packer to trucks.

Biggest Saving in Packing

6. The biggest labor saving has come in packing. One man now does what 3½ did formerly. Previously packing was done with manual scales under the bins in the mill. Then a new Richardson automatic single-bucket packer was installed in a room built in the warehouse area. As explained above, this workman, with controls adjacent to the packer, directs conveying of feed from the mill bins to the packer. The bagged feed moves by inclined belt conveyor up to the second floor warehouse or through the warehouse by belt to the truck dock. At first, there was quite a bit of bag breakage, Mr. Widler noted, but by easing turns and drops, breakage was reduced 300%.

7. A new truck dock for loading out, described above, also was built recently.

8. A year ago, nine 10-ton steel bins from the company's old flour mill in Abilene were installed alongside the feed mill. Trucks drive under the bins and are loaded by gravity. There are rack and pinion gates on the bins.

Records of man-hours and production in the various operations and in the plant as a whole are kept, and a recent month's records showed that the mill was turning out feed at a rate of .933 man-hour per ton. This compared with .967 as the industry standard for a comparable size mill. The Naturich mill was better than the production school standard on receiving; somewhat over on manufacturing, packing and warehousing; and less than the standard on maintenance. One handicap has been less bulk ingredients than in the model mill used as a standard. However, Mr. Widler said, the firm is aiming for .8 or .75 man-hour per ton.

Many of the improvements were made after analysis and comparison with the standards announced at the 1956 production school. However, the supervisors also applied the 1957 information as they sought to make their new facilities still more efficient. This included data and instructions on both time and motion studies and work sampling, mostly the latter. Work sampling involves making numerous spot observations of just what a workman is doing when observed—such as working, waiting for another operator, loafing, out of the department, etc. In this way, the amount and type of idle time and productive time are determined. The company has run two surveys, with 1,200 observations in each.

The results showed, for example, that in the warehouse, in the first survey, the men were engaged in productive activity 64.6% of the time. A second survey a few months later showed productive activity at 68.4%. The managers expect that this can readily be improved by another 10% through better supervision and scheduling and a warehouse man then could help elsewhere also.

Similar checks have been made in other departments. In mixing and pelleting, for example, the men are productive about 88% of the time. In packing and molasses operations, it is 84%, with further improvement expected.

Mr. Widler and Mr. Rider also have used time studies on some jobs. They have taken time standard data from the production school and determined just how long it should take to perform a certain bag handling operation, for example. Then this has been compared with what the men have been doing, showing how improvements can be made. The information also has been used in gearing scheduling of orders, packing, etc. to an efficient basis.

The work sampling, plus the standard time information, has made it possible first to find deficiencies and then to determine what should be done and make corrections.

The basis for comparison and improvement is found in a record keeping system which the Naturich plant uses. From time cards, a daily work report is made up, showing man-hours for the various workmen in the different categories. (See daily time report form in accompanying illustration.)

This information, in turn, is used

Nine 10-ton bins for bulk finished feed were recently installed alongside the mill. Trucks drive under the tanks and are loaded by gravity.

Mrs. Coleen Gates of the office staff is responsible for many of the production records which are used to maintain a continuing check on efficiency.

DAILY TIME REPORT

Date _____

Employee	Elevator Grain	Feed	Mix	Pack	Molasses	Sweep	Ware-house	Maint-enance	Con-structn	Total
DAILY TOTAL										

This daily time report form is used in a record keeping system which helps in improving plant operations. This report, made up from time cards, shows man-hours for the various workmen in the different categories.

Your Feed Requirements

C. J. MARTENIS GRAIN CO.

44 Whitehall Street
NEW YORK 4, N.Y.
Phone:
Bowling Green 9-4447

Bran and Middlings
Dried Brewers' Grains
Citrus Pulp
Cottonseed Meal

Distillers' Grain
Old Process Oil Meal
Soybean Meal
Beet Pulp

ALWAYS SELL
OAKES
Sanitized
POULTRY EQUIPMENT
Set the table RIGHT for GREATER POULTRY PROFITS
No. 1684 "COMFORT SPOT" GAS BROODER
The "Comfort Spot" Gas Brooder takes care of 500 to 750 chicks, eliminates "hot spot" areas with the right temperature everywhere.
No. 678-B—New, Improved ALL-PURPOSE AUTOMATIC WATERER
Sturdy angle bar under trough anchors 2 end stands together (see below). Permits easy moving. 8 feet long. 15" adjustable height. Serves 400 broilers.
Available with blue porcelainized trough —No. 1678
No. 860-T— FLOCK FEEDER
Ideal feeder for hens, chicks or turkeys 8 weeks and older. Adjustable channel steel legs, capacity—4½ pecks.
(Cap. 40#) (Cap. 35#)
HI-LO HANGING FEEDERS— the most wanted hanging feeder. R-35 one-piece hopper has tapered sides to prevent feed bridging.
SEND FOR FREE 1958 CATALOG
Just off the press! Full of new improved money saving Poultry and Hog Equipment.
New "POULTRY CHEF" Mechanical Feeder
The most flexible feeder on the market, 2 hopper sizes. Write for special catalog folders.
OAKES MANUFACTURING COMPANY, INC.
P. O. BOX 14 TIPTON, INDIANA
SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION
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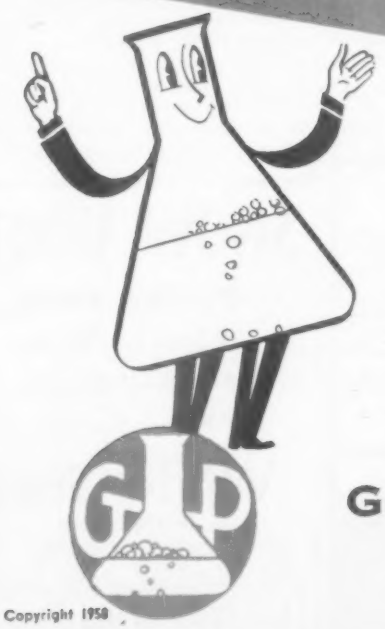
It's continuous!

SOLULAC

70% corn distillers solubles
30% corn distillers grains



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It goes on every week — like the production and availability of Solulac! That's why those who formulate feeds with Solulac always are confident of a *continuous* supply. Now is a good time for you to start with Solulac, to make use of its high nutritional values, its unidentified growth factors and vitamins. Guaranteed to be free flowing. Available in 50 and 100 pound bags or bulk carloads. Write, wire or phone. Grain Processing Corporation is also a *continuous* source of corn distillers dried grains.

GRAIN PROCESSING CORPORATION
MUSCATINE, IOWA • Telephone AMherst 3-1321 TWX 495
Primary Fermentation Products

Riboflavin — Vitamin B-12 — Bacitracin — GP-101, source of whey and other unidentified growth factors.

in preparing a weekly productivity report, which shows man-hours per ton in each department. (See accompanying form.)

These, along with other records, show the management and superintendent just where things are going smoothly or where there is room for improvement.

Mr. Grubb explains the production improvements as a team effort. For one thing, Thomas Welsh, from company management, went to the production school, saw just what efficient operations should do and then helped provide the tools to carry out the improvements. Mr. Widler, Mr. Rider and their crew of good workmen analyzed the operations and then made the efficiency-boosting changes through both new equipment installations and more scientific planning and management.

The net result—a plant operation just about three times as efficient as it had been only 1½ years ago.

Feeder Financing in Today's Changing Agriculture

By W. N. Stokes, Jr.
President, Federal Intermediate Credit Bank of Houston

EDITOR'S NOTE: The author of the accompanying article feels that new concepts have "elements of danger to American agriculture as we have known it." Current changes in agriculture, including integration developments, must be kept in balance to "retain the basic independence of American agriculture and the same basic independence of American business both small and large," declares Mr. Stokes. He says that it is important that the feed man and others retain financial independence. "If full use is made of existing credit facilities and the temptation is resisted to accept credit which appears to come easy because of the strings attached," he says, "the road ahead may be kept open, the trend to monopoly may be sidetracked, and independent business and agriculture may continue to prosper." This article is from a talk by Mr. Stokes at the Texas Feed Manufacturers Assn. convention.

It is almost a truism today to begin one's remarks with the statement that American agriculture is heavily involved in the dynamic process of change. Nevertheless, this is a fact facing us all, and one needs only to look around the countryside, visit his neighbors and read the agricultural journals to see what a revolution is taking place.

Statistics also show it. One Texas production credit association found recently that its average size loan to an individual has jumped from $164 in 1934 to $2,573 in 1948 and $4,443 in 1957. Meanwhile, the total number of members has declined. In 1954 the association had over 1,200 members. In 1958 the membership had dropped to 961. These figures are also borne out on a state-wide basis.

At the same time farm units are on a decline in number and an incline in size of the individual units. Population on Texas farms has been cut about in half between 1917 and 1957.

What has caused these developments; what are their implications; whence will they lead?

The causes are complex in their ramifications, but rather simple in over-all design. First, there have been mechanical changes; all along the line new equipment has increased enormously the efficiency of planting, cultivating and harvesting. Secondly, there have been astounding chemical changes; new fertilizers and insecticides have increased the fertility of our acres and have decreased materially the hazards of crop damage by natural enemies. And finally, there have been the blessings of research which have introduced new breeding and growing procedures to increase the efficiency of production all along the line.

Changes in Distribution

There have been changes too in the methods of distribution. Farmers today, must plan with the specifications of the chain store package in mind. The market place has moved from the town square to the supermarket. And these changes necessarily have involved new concepts of production, distribution and financing.

When such changes take place, a new vocabulary is created. Thus today we hear everywhere such terms as "vertical" and "horizontal" integration, "contract farming" and any number of other words and phrases to identify the new approaches to these problems.

While all kinds of definitions of terms are available, I believe we may restrict them for purpose of trying to get an over-all look at the situation to the one big word "consolidation," which the dictionary defines as "to unite or press into a compact mass—to combine into a single whole."

And we need to look today at the processes of this consolidation.

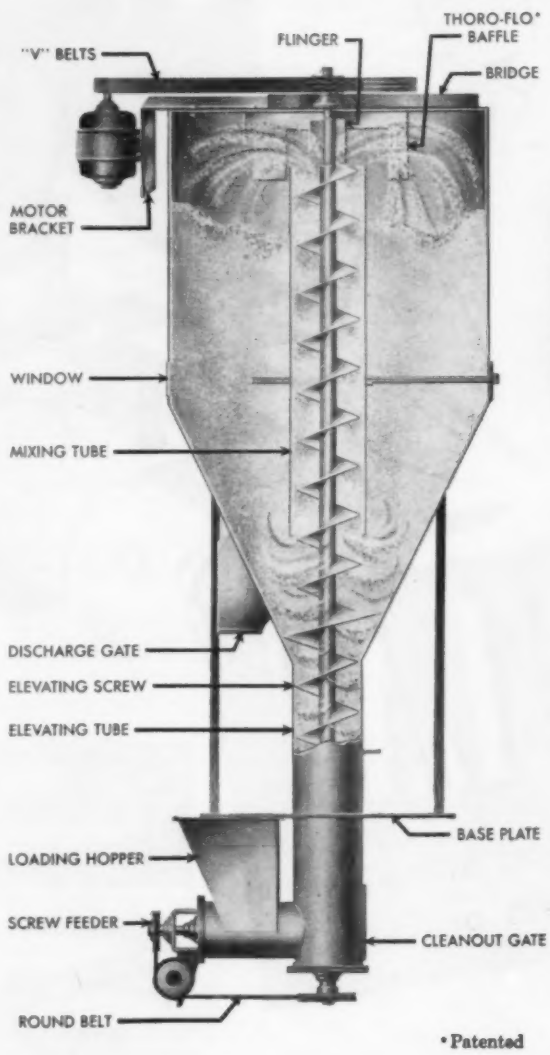
First, it is manifested in the movement of business toward the farm. This movement in concept is not new. Sugar beets, for example, have been grown under contract for many decades. Canning companies as long ago as 1920 were making contracts with farmers for production of crops under specification, and in order to insure quality and timely production

(Turn to FEEDER FINANCING, page 85)

SW Data Sheet

Sprout-Waldron

The diagram of the VERTAMIX at right illustrates how the slotted, baffle-ring, patented THORO-FLO, provides for more uniform distribution of materials and a more level deposit surface.



VERTAMIX

*Patented

The Sprout-Waldron VERTAMIX is an outstanding vertical mixer for reasonably free-flowing poultry or animal feed formulas. It is thorough, fast, economical, quiet, versatile, flexible, self-cleaning, safe and compact. For maximum mixing efficiency where minimum floor space is available, the VERTAMIX vertical mixer is in a class by itself.

operational details

An efficient, forced-feed feature loads the VERTAMIX as fast as material can be brought to it, and definitely reduces the mixing cycle. This provides maximum output with minimum man hours.

The discharge gate has all working parts enclosed and the handle swings free of the gate to protect hands. Gates can be located at any position on the cone and can be locked at any desired rate of discharge. Spout can be locked or used as cut-off valve. Belt drives at top and bottom of mixer eliminate noisy, troublesome gears, reduce lubrication requirements.

The patented THORO-FLO feature of the VERTAMIX gives a more evenly distributed flow of materials than is found in conventional mixers. Minimum recirculation is needed for a well-balanced mix, even of materials of widely different sizes and weights. Pellets and mash can be thoroughly mixed together.

VERTAMIX is so easy to install, no millwright is needed. A large access door and split tube around the mixing screw facilitates cleaning and maintenance.

specifications

Capacities Model	Cu. Ft.	Bushels	Height to Floor Level	Dia.	Hp.	Shipping Weight	Rpm. Mixing Screw
F100	100	80	11′ 5½″	60″	5	2300 lbs.	212
F150	150	120	13′ 11½″	60″	7½	2800 lbs.	212
F200	200	160	16′ 5½″	60″	10	3300 lbs.	212

FD/107

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The Best in Processing Equipment Since 1866
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Modern equipment for—size reduction • mixing and blending • bulk handling equipment • size classification • pelleting and cubing

SNOW WHITE
OYSTER SHELL
• Steady Profits
• Highest Quality
• Best Service
White Shell
CORPORATION
Jacksonville, Florida

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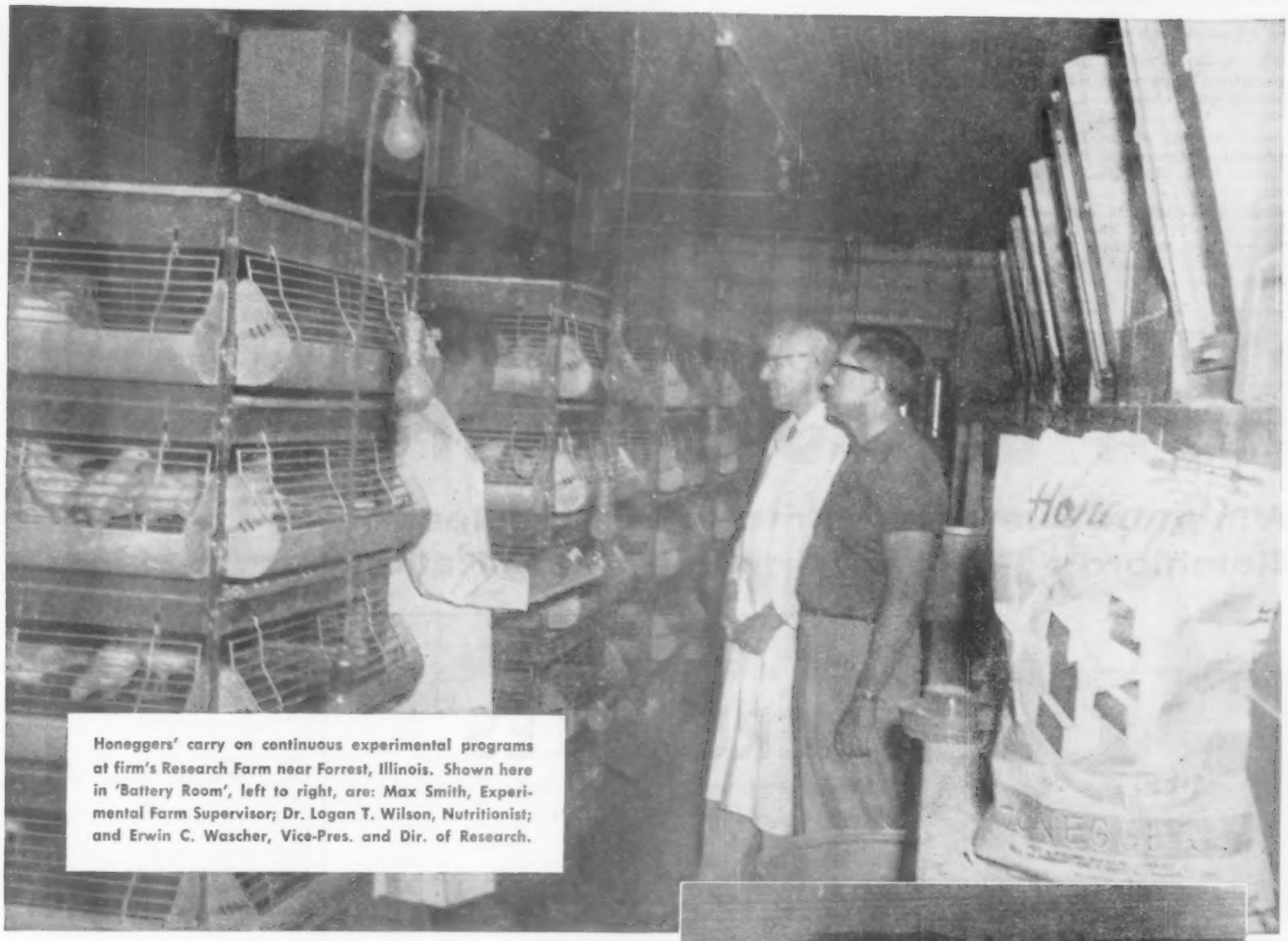
177 Milk St. Boston 9, Mass.

Leading Feed Manufacturer Adds Fat to 90% of Total Feed Production!



Honeggers' carry on continuous experimental programs at firm's Research Farm near Forrest, Illinois. Shown here in 'Battery Room', left to right, are: Max Smith, Experimental Farm Supervisor; Dr. Logan T. Wilson, Nutritionist; and Erwin C. Wascher, Vice-Pres. and Dir. of Research.

Honeggers', well-known feed manufacturer and operator of one of the nation's largest and most successful hatcheries, required only one thorough experiment to prove the extensive benefits of adding fat to their popular "Big H" feeds.

Today, this progressive manufacturer, with mills in three midwest states, uses fat in a good 90% of their total feed production—which includes almost 80% of the company's widely-used brands of chick, hog and cattle feeds.

Scientific use of fat is a major factor in Honeggers' "Hyper Energizer" feed-improvement process. The company's continuing research has repeatedly confirmed the value of adding fat to many types of feed.

Fat increases feed efficiency more than any other single ingredient. It provides 125% more energy value than pure carbohydrates or protein—and, in poultry feed, results in a better finish on the birds. Further, as is well known, fat reduces dustiness in feed, improves appearance and palatability and increases capacity of pellet mills.

As for mixing and applying, Honeggers'—one of the first to use fat in feed extensively—finds no problem at all. The fat is brought in by tank truck from nearby suppliers. It is stored in bulk tanks, and sprayed directly on the feed in the mixers.

(Air view, Honeggers' mill—Fairbury, Ill.)

Production is no problem in Honeggers' modern mills. Fat is simply sprayed on feed in mixer.

Write for Free Booklet

It fully describes the application of fat to feed, and how simply it may be used to improve the product of any mill and mixing operation.

nra national renderers association

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CONVENTION CALENDAR

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear ahead of the ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

July 25—Ohio Sheep Day; Ohio Agricultural Experiment Station, Wooster, Ohio; chm., Dr. L. L. Rummell.

Sept. 5—Ohio Swine Day; Ohio Agricultural Experiment Station, Wooster, Ohio; chm., Dr. L. L. Rummell.

Sept. 8-9—Minnesota Animal Nutrition and Health Short Course; University of Minnesota, St. Paul; chm., Dr. C. L. Cole, Dairy Husbandry Dept.

Oct. 10-11—Arizona Grain and Seed Assn.; Hotel Westward Ho, Phoenix, Ariz.; sec., Hayden C. Hayden, Box 156, Tempe, Ariz.

1959

Feb. 9-10—Montana Nutrition Conference; Montana State College, Bozeman, Mont.; chm., Dr. O. O. Thomas, Animal Industry Dept.

March 19-20—Oregon Feed & Seed Dealers Association; Multnomah Hotel, Portland; sec., Russ Hays, 702 Lewis Bldg., Portland 4, Ore.

June 7-9—Eastern Federation of Feed Merchants, Pocano Manor Inn, Pocano Manor, Pa.; sec., Austin W. Carpenter, Sherburne, N.Y.

• • •

July 18-19—Kansas Seed Dealers Assn., Hotel Broadview, Wichita, Kansas; sec., O. E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

CALENDAR FOR 1958-59

JULY

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July 22-25—American Poultry & Hatchery Federation; Cleveland Auditorium (Ohio); convention mgr., Ed G. Gray, 521 E. 63rd St., Kansas City 10, Mo.

July 27-28—New Mexico Grain & Feed Dealers Assn.; Hotel Clovis, Clovis, N.M.; sec., Parley Jensen, P.O. Box 616, Albuquerque, New Mexico.

July 27-Aug. 2—Executive Development in Management School; University of Georgia, Athens, Ga.; Harold E. Ford, secretary, Southeastern Poultry & Egg Assn., 235 Ponce de Leon Ave., Decatur, Ga.

Aug. 4-5—Feed Microscopy Short Course, Texas Agricultural Experiment Station, College Station, Texas; sec., E. E. Brown, Assistant State Chemist, Texas Agricultural Experiment Station.

Aug. 5-6—Mid-South Soybean & Grain Shippers Assn.; Hotel Peabody, Memphis, Tenn.; sec., Paul C. Hughes, P.O. Box 692, Blytheville, Ark.

Aug. 8-9—North Carolina Feed Manufacturers Assn.; Grove Park Inn, Asheville, N.C.; sec., A. W. Koon, Box 1664, Spartanburg, S.C.

Aug. 12-13—Mutual Millers & Feed Dealers Assn.; Hotel Jamestown, Jamestown, N.Y.; sec., Mrs. G. A. Bentley, 41 Chautauqua Ave., Jamestown, N.Y.

Aug. 18—National Soybean Processors Assn.; Hotel Fort Des Moines, Des Moines, Iowa; sec., R. G. Houghtlin, 3818 Board of Trade Bldg., Chicago 4, Ill.

August 18-19—Wisconsin Nutrition School; University of Wisconsin, Madison, Wis.; chm., Dr. R. H. Grummer, Department of Animal Husbandry.

Aug. 18-19—Kentucky Feed Conference, sponsored by Kentucky Feed & Grain Assn. and University of Kentucky; Campbell House, Lexington, Ky.; sec., Fred H. Schardt, Box 1914, Louisville 1, Ky.

Aug. 19-20 — American Soybean Assn.; Hotel Fort Des Moines, Des Moines, Iowa; sec., George M. Strayer, Hudson, Iowa.

Aug. 22—Purdue Swine Day; Purdue University, Lafayette, Ind.; chm., J. H. Conrad, Animal Husbandry Department.

Aug. 25-28—Georgia Poultry Institute; Rock Eagle 4-H Club Center, Eatonton, Ga.; chm., J. H. Massey, Extension Poultryman, University of Georgia, Athens, Ga.

Sept. 5—Missouri Swine Day; Uni-

(Turn to CALENDAR, page 82)

NOW SELLS 2 WAYS!

Win more customers...more repeat sales with Blatchford's 2 Treat-Formulated Dog Rations

1

Blatchford's ESTABLISHED IN 1899

CRUMBLES

Moistureizes immediately for instant feeding!

Combines Crumbles and Kibbles in crumble-ized form for quicker, easier *instant* mixing with liquids, extra flavor, chewy firmness! (has extra flavor, extra appetite appeal in dry form, too!)

2

Blatchford's ESTABLISHED IN 1899

REGULAR

Crunchy delicious for delightful taste variety!

Combines Kibbles and Pellets for taste-tempting flavor, extra appetite appeal in easy-to-feed dry form. (mixes easily with liquids and table scraps, too!)

LOOK FOR THIS TAG →

Now! More "Buy-Appeal" for Every Dog Owner!

Now, with new Blatchford's CRUMBLES and REGULAR DOG-RATION you can give owners the kind of feeding they like best for their dogs. You'll satisfy more customers—make more repeat sales, too. Because dogs love the extra flavor, extra appetite appeal of *Treat-Formulated* DOG-RATION—keep coming back for more. And dog owners like the savings they make! Low-cost, premium quality DOG-RATION is a scientifically blended, balanced diet for maximum health and good spirits.

Ask your distributor for new CRUMBLES and REGULAR Blatchford's Treat-Formulated DOG-RATION, now available in both 5 lb. and 25 lb. bags. Or write Blatchford's today. Dept. 278

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Main Plant and Offices: WAUKEGAN, ILL.
Midwest Division: Des Moines, Iowa
West Coast Division: Nampa, Idaho

Which grain dryer **is self-cleaning?**

ARID-AIRE
...and you can RENT IT!

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"If I were only 25 years younger..."

"Yes, don't we all wish it. But just think of the opportunity ahead for today's young folks. The way this country's growing and booming . . . all the new things being invented . . . the new jobs opening up . . . why, I'd give anything to be just starting out again!

"And you know where I think the *real* opportunity is? Right here—on this land, on this farm.

"Now, I'll grant that farming is going to require a man to stay on his toes like he never has before. Improvements are coming to farming, just like they are to everything. And it makes sense that farming methods will have to improve, too, if we're to do the job ahead on land already under cultivation.

"To be a good farmer, it'll mean a man will have to keep up with changes. New ideas. Better ways of doing things. And he'll have to be an even smarter business man than he is today.

"You know, I remember my dad telling me about my future in staying with this farm. He was sure right. Things have followed the same pattern since then that they will in the future. In some ways, farming's a lot easier now than it used to be. But in other ways, it's a much bigger challenge. That's why you just can't run a farm on any kind of "city hours". It's the *extra* time and work that enables you to make money in farming. I don't mind it, though. It's a great feeling to run your own business. And I wouldn't trade farming for any other life.

"I wonder about my boy. Roy's just 12 now . . . and he lives pretty much for the present. He's got good sense, though . . . makes a lot of his own decisions already. And I think once Roy grows up and gets serious about a career, he's going to like what he sees ahead for himself right here.

"For one thing, he will already have had about ten good years of farming experience. And then, when you consider how big the population will be when Roy's grown up . . . there's going to be millions of extra mouths to feed. Industry will be wanting more and more farm crops, too.

"Yes, I'd say if a young man is really looking ahead—and he prepares himself well, both with schooling and practical experience—he'll see the future in farming is well worth being in on.

"*I'm counting on a share in it myself.*"

As people who have worked closely with the farmer for 93 years, we at Cargill agree: the future looks bright.

Our business is Creative Processing: helping change raw farm products into things people will need and buy. This is why we're confident—with a predicted U.S. population of 220 million by 1975 (and a world population of nearly 3 billion)—Cargill Creative Processing will be wanting an ever-increasing number of crops from you, your children and *their* children.

This helps your farming business keep in step with a growing and hungry America . . . makes our position as No. 2 man on the farmer-processor team more stimulating than ever before.

93 Years of Creative Processing of Farm Products

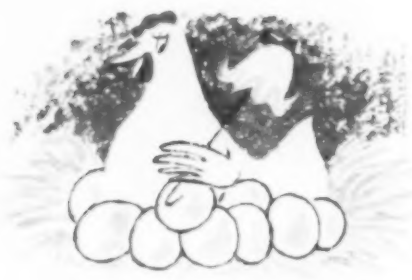
CARGILL

For free reprints, suitable for framing, write Cargill, Inc., 200 Grain Exchange, Minneapolis 15, Minnesota

Soon it'll be pullet-housing and brand-selection time! Here's how

EGGtober

can increase your '58-59 laying-feed sales



What is EGGTOBER? It's the EXTRA month or more of extra-egg production your customers get when your laying-feed program includes an Extra-Production Laying Feed containing Terramycin. It's a fully rounded national program *you* bring down to the local level!

EGGTOBER provides a platform for your own fall laying-feed promotion . . . AIMED at the most important time of your year—pullet-housing and contract-selling time! . . . DESIGNED to help you sell your poultrymen customers an extra-egg feeding program—all year long!

. . . and EGGTOBER sets the stage for your dealers' special "in store" sales events. Your dealers run their own special events the way you and they think best. The opportunity for unique selling ideas to tie in with the EGGTOBER theme is as boundless as your imagination.

As idea starters, we've worked up some materials that are free for the asking: in-store display booklet, suggested radio announcements, mats and photos, publicity releases and promotional ideas your dealers can use to create interest in EGGTOBER in their home towns.

PLUS this exciting, 3-dimensional, life-size, full-color store display unit! 5-ft. high, realistic, appliqué and paper sculpturing treatment. Closely identifies your dealers with this national EGGTOBER promotion. Each unit can be personalized with bags of YOUR BRAND Extra-Production Laying feed.

Spearheading an aggressive, national saturation advertising campaign will be special EGGTOBER billboards in more than 400 locations from coast to coast—reminding your customers on the way to town of the extra eggs and extra profits they can get with your EGGTOBER feeding program.

PLUS ads in national farm magazines and in specialty journals; radio spots, national and local publicity. A real live Miss EGGTOBER will build excitement, interest and appeal into this promotion during the summer months when you are setting the stage for your EGGTOBER event.

Here's the face of a poultryman after trying *your brand* Extra-Production Laying Feed containing Terramycin. Typical poultrymen have reported up to an extra dozen eggs a day from every 100 hens . . . as much as 37% more eggs! . . . suffered fewer laying slumps . . . had stronger eggshells and lower mortality!

And here's where EGGTOBER will pay off. It's this year's BIG egg-feed program promotion. See your Pfizer representative soon for full details on the national EGGTOBER campaign . . . plus plenty of sales-promoting idea-starters . . . to help you develop your own localized laying-feed sales promotion.

it's EGGtober
for extra eggs use
EXTRA – PRODUCTION LAYING FEED CONTAINING POTENT TERRAMYCIN
EGGtober
EXTRA month of EGGS with Potent TERRAMYCIN

Extra-Production Laying Feeds with **potent Terramycin**®

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Feed Service Bulletin Board

Helpful Notes on Feeding and Management for Feed Men and Their Customers

Buying Started Pullets

As laying flocks get larger, the idea of buying started or ready-to-lay pullets becomes more attractive to poultrymen, according to Walter Russell and Glen Geiger, University of Missouri poultrymen. Each day, they say, more interest develops in such programs.

Here's the advice they give poultrymen who are considering buying started pullets:

1. The pullets should be of a high-producing strain which came from a reliable hatchery.

2. The chick farm must have a good disease-free history and must have followed a satisfactory vaccination program in the production of the pullets.

3. Producers buying the pullets should be sure that the ability of the pullet producer to brood and rear chicks is high and that his reputation in his community is unquestionable.

4. Buyers should be sure the management and feeding program followed by the pullet producer is one that results in well-developed, healthy stock.

As additional recommendations, the Missouri poultrymen urge that pullets bought for the laying house should be checked by the buyer during the growing period; should be even in size and of the proper weight for their age; should be delivered in disinfected crates, and are carefully handled during cooping and delivery.

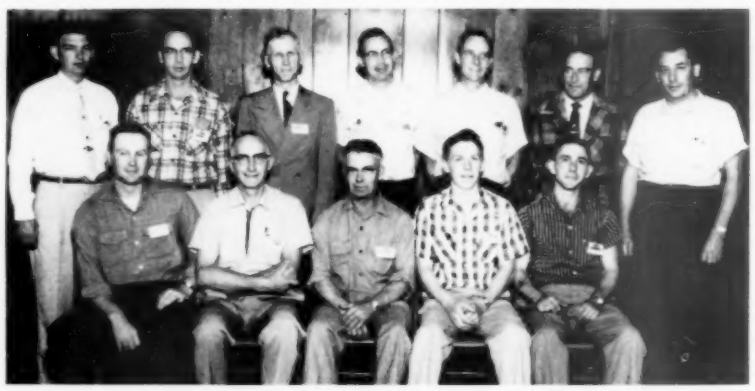
◆

Parasites Threaten Now

This is the time of year when livestock producers should be on the watch for parasites in young farm animals that have just been weaned, livestock authorities caution.

Some of these parasites, such as tapeworms, rob the host animal of the nutritional elements in feed. Others suck the blood of the host animals and cause anemia. Some

(Turn to BULLETIN BOARD, page 83)



HUBBARD TRAINING SCHOOL—Feed men attending the recent training school held by Hubbard Milling Co., Mankato, Minn., are pictured here. Left to right in the front row are Bill Hasher, Minnesota Lake, Minn.; Orville Wheelock, Hope, Minn.; Harold Harris, Lewisville, Minn.; David Bunjer, Arco, Minn., and Jack Roberts, Victor, Iowa. Left to right in the second row are Tom Butler, Mankato, Minn.; Elmer Berg, Emmons, Minn.; Tom Haukoos, Walters, Minn.; Larry Saylor, West Bend, Iowa; Kent Eichelzer, Ft. Dodge, Iowa; Marvin Koerschen, Cosmos, Minn.; Dick Pulse, Eldora, Iowa. Hubbard personnel conducting the school were George Patrias, director of research and nutrition; Don Madden, sales manager; Carl Todtleben, sales training assistant, and Vern Lundin, director of advertising and public relations.

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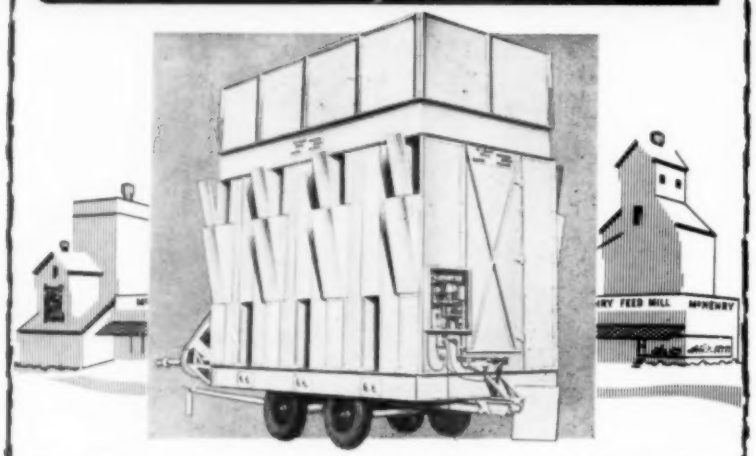

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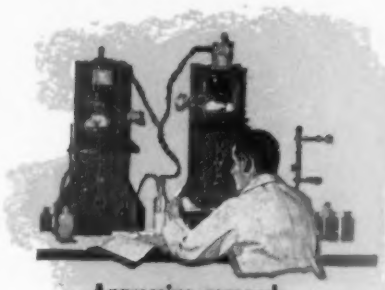

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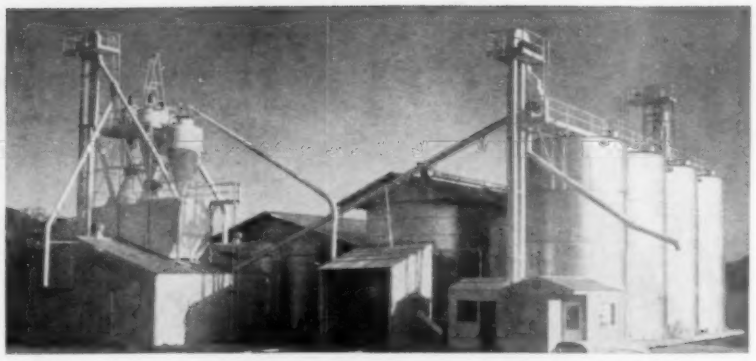

NEW MILL—This $150,000 cattle feed mill, including pelleting facilities, was recently built at Dr. J. R. Somavia's Rancho Quien Sabe at Hollister, Cal. Results of experiments at the Stanford Research Institute on feeding a pelleted complete ration for cattle were used as a basis for the plant's construction.

CATTLE ON TEST—These cattle are a few of those used in Stanford Research Institute feeding trials which indicated that cattle fed a pelleted complete ration gain just as well as they do on loose-mix feed, and do it on 13-15% less feed.

Tests Show Cattle Need Less Feed on Complete Pellet Ration

EDITOR'S NOTE: The following story deals with Stanford Research Institute research on pelleted complete rations for beef cattle. An earlier story on this work has appeared in Feedstuffs, but the following provides more detail on a study of this currently interesting method of preparing and feeding rations to cattle.

Cattlemen can reduce feed costs and expenditures for ranch labor by fattening steers with a pelleted complete ration, according to a new study recently completed by Stanford Research Institute, Palo Alto, Cal.

The studies show that steers fed pellets gain weight just as well as those fed the traditional loose-mix feed. The pellet-nourished steers, however, require from 13-15% less feed to achieve such weight increase. In addition, the pellets can be used with self-feeding devices, reducing the effort previously required to feed the animals.

Four groups of Hereford steers slightly younger than yearlings and weighing about 600-800 lb. were used in experiments conducted by SRI for Dr. J. R. Somavia of the Rancho Quien Sabe, Hollister, Cal.

Two groups were fed a high-roughage ration in loose-mix and pelleted form, respectively, for 120 days. The other two groups were given a high-concentrate feed, one receiving a loose-mix ration and the other receiving pellets. Sixty-four percent of the high-roughage feed consisted of alfalfa hay combined with barley and oat hay. The high-concentrate ration contained 60% barley, cottonseed oil and molasses.

The two types of rations were prepared under carefully controlled conditions from the same supply of ingredients to keep feed variation to a minimum. Samples of both the mix and the pellets were analyzed periodically to check on content consistency.

Weight gains for all four groups of steers were not significantly different. However, the feed efficiency

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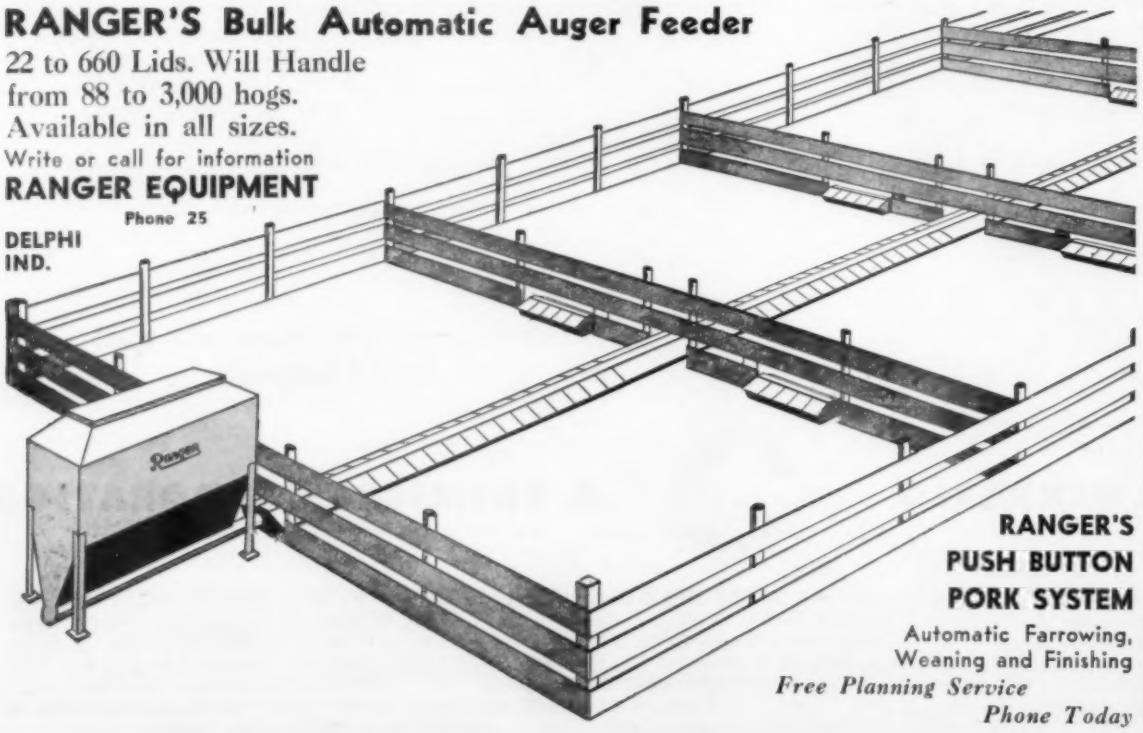

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MR. FEED MANUFACTURER:

Here are the answers to frequently asked questions from hog raisers about the new, fast-moving worm control additive, 'Hygromix.'

Reprints, in reasonable quantities, are available upon request. Please send your requests to Eli Lilly and Company, Agricultural and Industrial Products Division, Indianapolis 6, Indiana.

Question and Answer roundup of important 'Hygromix' facts

Q: How many kinds of swine worms will 'Hygromix' control?

A: **Research to date proves that 'Hygromix' controls three worms: the large roundworm, nodular worm and whipworm. Further research may prove that other kinds are affected.**

Q: How does this compare with older-type treatments?

A: **With "purgers" you could periodically remove most roundworms and some nodular worms. They did not touch the damaging whipworm. 'Hygromix' gives continuous control of all three.**

Q: Why do you emphasize "continuous" control of worms?

A: **Hogs pick up worm eggs every day and carry worms in many stages of development. Because of this, young worms enter the intestinal tract day after day. 'Hygromix' feeds kill worms *before* they mature and lay eggs. Swine worms are a continuous problem. With 'Hygromix' feeds you fight the problem full time instead of part time.**

Q: My pigs are doing fine on 'Hygromix' but I haven't found any dead worms. Is this normal?

A: **Yes, because 'Hygromix' is not a purger. When you feed it as recommended, beginning with baby pigs, you kill worms before they grow to adult size. Because 'Hygromix' kills worms early you seldom see them in the feedlot.**

Q: Will 'Hygromix' help pigs that are infested with mature worms?

A: **Yes. If pigs are healthy enough to eat normal amounts of feed, 'Hygromix' will stop worm-egg production quickly and kill the worms in about three weeks.**

Q: My pigs never seem to get more than one kind of worm, the large roundworm. Is that usual?

A: **The large roundworm is easy to see. The other two are smaller and hard to recognize. Careful research shows that most hogs are infested with more than one kind of worm. Chances are your hogs have more than one kind.**

Q: I've been marketing 200-pound hogs in about five months. Could I do this if I had a worm problem?

A: **Yes, but it has probably cost you money. You can often keep the worm problem from becoming critical through good sanitation and top-notch nutrition. For instance, University of Wisconsin scientists checked internal organs of 101 market hogs that had been declared "normal, healthy" hogs by veterinary inspection. They found an average 463 *worms per hog.* The problem was there. It had just been masked by good nutrition. The price had been paid in lost feed and lost gains. 'Hygromix' feeds furnish built-in protection against this type of hidden, but costly, damage.**

Q: How can 'Hygromix' help protect against secondary disease and infection?

A: **'Hygromix' feeds reduce damage and irritation to the intestine, caused by worms, and thereby helps prevent sites which are likely to attract secondary infection and disease.**

Q: What are your recommendations for feeding 'Hygromix' to market hogs?

A: **Use 'Hygromix' feeds continuously for all pigs from farrowing to at least 125 pounds. Hogs over 125 pounds in contaminated lots or subject to continuous reinfestation should get 'Hygromix' feeds all the way to market weight.**

Q: Do you recommend feeding 'Hygromix'-fortified feeds to breeding stock?

A: **Yes. For boars, use 'Hygromix' feed continuously throughout the breeding season. For gilts and sows, use 'Hygromix' feed continuously throughout the breeding season, during gestation, and until the pigs are weaned.**

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of the pellets (pounds of feed required per pound of weight gain) was higher than that of the loose mix.

Steers fed the high-roughage pellets ate an average of only 25.3 lb. of feed per day per steer, compared to a 28-lb. intake for those fed the mix. For each 100 lb. of weight gained, the pellet-fed cattle required only 1,193 lb. of feed, compared with 1,410 lb. for the steers eating the loose feed.

For the high-concentrate, the average daily consumption per steer was 25.9 lb. of pellets, compared with 30.2 lb. of loose mix. Those on the pellet ration consumed only 1,097 lb. of feed per 100 lb. of weight gained, compared with 1,196 lb. required by the animals receiving the mix.

The health of the cattle remained at a high level through the experiment. The grade of meat obtained from all the steers was about the same regardless of the type of ration, according to the research report.

The reasons for the greater feed efficiency of the pellet, however, have not yet been clearly established. It has been suggested that the fine grinding of the ingredients before pelleting, and the momentary heating that occurs when the pellet is being formed, may aid in increasing the digestibility of the pellet. Another possible answer lies in the failure of the pellet-fed steers to ruminate,

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thus using less energy for eating, SRI researchers say.

Most experiments on the fattening of stock used for meat have considered only the basic costs of animals and feeds. To be realistic, however, related labor and operational expenses must be included to determine the true economic feasibility of a feed form that provides better weight gain. These can often outweigh any advantage obtained from savings in feed cost alone, the report stated.

Consequently, the labor and handling expense for the two types of ration were carefully recorded. The high-roughage pellet provided a savings of 12% on total costs compared to the loose mix. For the high-concentrate ration, the pelleted feed provided a 10% advantage over the loose feed.

Special Ration Studies

In conjunction with the pelleted feed experiment, other studies were conducted to determine the suitability of especially high-roughage and supplemented diets on preparing steers for market.

Experiments elsewhere have indicated that sheep, for example, can be successfully fattened on high-roughage diets, the report pointed out. To see if these results were applicable to cattle, another group of 120 steers was fed for 90 days on pellets containing 85-95% hay, as

Congress and Exposition

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I. D. Russell Labs . . . . . Kansas City, Mo.

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Smith-Gates Corp. . . . . Farmington, Conn.
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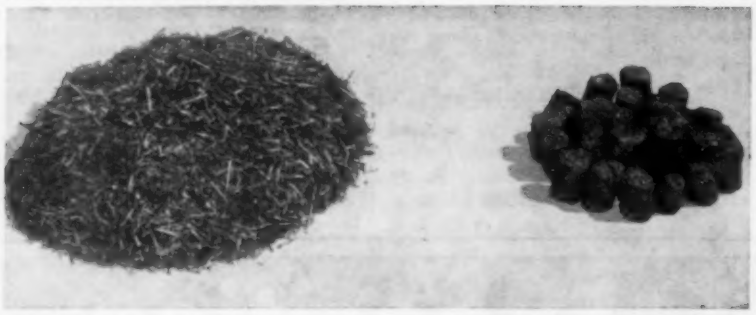

FEED FORMS—This close-up picture shows the high-roughage ration, loose mix and pelleted, used in the Stanford Research Institute cattle feeding trials.

compared to the 64% hay pellet previously described. The results indicated that this ration was not sufficiently nourishing, on the basis of the experimental period, to "finish" the steers satisfactorily for marketing purposes.

Studies conducted by other organizations and individuals have indicated advantages resulting from supplementing cattle feed with antibiotics or growth-stimulating hormones, SRI researchers related. Consequently, four groups of 40 steers each were fed, respectively, a commercial pellet ration, and the same ration supplemented with either Aureomycin, or stilbestrol or both. The average daily weight gain per steer for those receiving both supplements was 2.84 lb., compared with a weight gain of 2.48 lb. by the steers receiving the unsupplemented pellet. Growth gains from either supplement were not as satisfactory as those from the combination.

New Pellet Mill

While the feed comparison studies were in progress under the direction of Dr. G. W. Newell, SRI senior biochemist, C. W. Marynowski, chemical engineer, investigated the equipment and cost requirements for a feed mixing and pelleting plant.

The resulting estimates, supplemented by the cost advantages of the pellets indicated by the steer-feeding experiments, led to the recent construction of a large feed mill at Rancho Quien Sabe.

The mill can process 4-6 tons of pellets an hour, or turn out large quantities of loose-mix feed. Provision is made for feeding pellets to the steers by means of self-feeders with a 4½-ton capacity.

Ohio Station to Add Swine Research Farm

SPRINGFIELD, OHIO — A swine research farm will be set up in western Ohio by the Ohio Agricultural Experiment Station, announced L. L. Rummell, director of the station. He reported that funds have been released by the board of control to buy a 428-acre tract of land for the farm.

The new substation will be devoted largely to solving current problems in hog farming, although research with other livestock may be undertaken. It is the ninth in a chain of outlying farms operated by the station. The headquarters location is at Wooster, Ohio.

Purchase of the new farm, located near South Charleston, about eight miles southeast of Springfield, raises the total acreage owned by the experiment station to more than 4,000 acres. There are substations in Wood, Erie, Huron, Trumbull, Mahoning, Washington, Meigs, Brown and Clark counties.

Swine research has been carried on at Wooster and Columbus. The administration has felt the need for some time for a substation in the middle of Ohio's corn and hog region.

The new farm was formerly owned by Kroger Co.

Alfalfa Pellets Mixed With Ground Ear Corn Fed Cattle in Tests

WOOSTER, OHIO—Alfalfa pellets mixed with ground ear corn are being fed to steers in experiments at the Ohio Agricultural Experiment Station.

Dr. Earle Klosterman, beef specialist at the experimental farm, reports that although the pellets do not increase the daily gain of steers greatly, gains of 2.5 lb. daily can be realized on one third less corn.

The Ohio station is using a type of pellet that is much like dehydrated alfalfa pellets, the researchers said.

Dr. Klosterman said that most pellets manufactured today are intended chiefly for poultry or swine, and that there is a need for a high-roughage pellet better suited to ruminants like sheep and cattle.

"Pellets made from finely ground, dried alfalfa pass through the ruminant system too quickly before the food is converted into meat, milk or wool. In the beef tests, of course, the animals get sufficient roughage from the ground corn cob," the researcher explained.

A Toledo, Ohio, firm is manufacturing the high-roughage pellets for use at the experiment station. The station buys up sun-cured hay and ships it to the pelleting firm. Another Ohio firm is planning to make pellets for cattle and sheep.

Magazines Consolidate

CHICAGO—All rights to the publication of Rice News have been acquired by Grain & Feed Journals, Inc., Chicago, the latter firm has announced. The publication of Rice News hereafter will be consolidated with Grain & Feed Journals, Consolidated.

The publication hereafter will be known as Grain & Feed Journals and Rice News.

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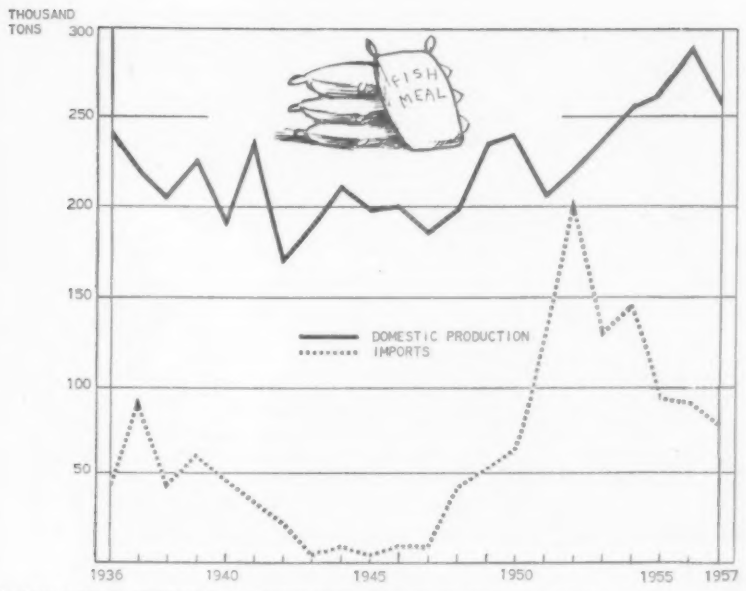

FISH MEAL IMPORTS, PRODUCTION—Both U.S. production and imports of fish meal were lower during 1957 than they were the previous year. The graph above, released by the Fish & Wildlife Service, shows that 1957 production of fish meal and scrap in the U.S. and Alaska totaled over 262,000 tons. This was a decline of 33,000 tons from the previous year. Imports of fish meal during 1957 were 81,200 tons, compared with 91,400 tons the previous year.

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Minnesota Feed Firm Names Contest Winner

SPRINGFIELD, MINN.—Some expert weight guessing on the part of Robert Zwach, Milroy, Minn., won him a boat and outboard motor presented the first day of the Minnesota fishing season by Springfield Milling Co., manufacturer of Vigorena Feeds. The Minnesota season opened recently.

Mr. Zwach guessed the combined weight of the boat and motor with Cedric Adams, Minneapolis radio personality and newspaper columnist, in the boat holding a fish. His guess was 525 lb., 14 oz.—right on the nose.

Mr. Zwach's Vigorena dealer, Casey Masterson, Masterson Elevator Co., Walnut Grove, Minn., received a $25 rod and spinning reel.

Alabama Feed Volume Shows 27% Increase

MONTGOMERY, ALA. — Alabama had a booming 27% increase in feed tonnage sold during the month of May over the previous May, according to a recent report from the Alabama Department of Agriculture.

Tonnage for May, 1958, was 89,627.37, compared with 70,382.62 for the same month a year earlier.

Poultry feeds showed the biggest gain. Tonnage for May, this year, was 64,776.07, compared with 47,191.57 for May a year earlier. This is an increase of about 36%.

Hog feeds increased from 3,586.64 tons to 4,425 tons and dairy feeds climbed to 6,751.31 from May, 1957, total of 5,712.83.

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NEPPCO EXHIBITION—Dr. Alfred Van Wagenen (right), managing director of the Northeastern Poultry Producers Council, discusses one of the special exhibit areas of NEPPCO's exposition slated to be held in Harrisburg, Pa., Oct. 7-9. At the left are Donald Lockhart and Doris Endebrock. Miss Endebrock is exposition manager. The witch doctor masks reflect the theme of the industry event—"Safari to Poultry Profits."

Wind Gusts Topple Tent at Delmarva Poultry Festival

DENTON, MD.—Heavy rains and wind gusts swept through Denton during the 11th annual Delmarva Chicken Festival June 26-28, blowing down the exhibition tent. Although none of the 300 people inside the tent was injured, several of the 50 exhibit booths were badly damaged.

The winds, with gusts up to 50 miles an hour, forced program activities indoors temporarily during the first festival day. The barbeque was held in the Denton High School.

Helen Le Pittard, 17, Georgetown, Del., was chosen queen of the festival. Miss Pittard, who will enter her senior year in Georgetown High School this fall, captured the title over 11 other entries from the Delmarva area. She plans to enter the University of Delaware to study home economics, and eventually teach in a Delaware high school. Janice Pippen, 17, Greensboro, N.C., won second place.

The winner received a $750 scholarship, a wrist watch, a $75 wardrobe, a three-piece set of luggage, a pearl necklace, two studio portrait offers, roses and a trophy. The runner-up was awarded a choice of a $200 scholarship or $100 in cash, a piece of luggage and jewelry.

Sen. John J. Williams of Delaware received the award as "Delmarva's Distinguished Citizen of the Year" in an outdoor ceremony preceding the beauty contest. The award was presented by John R. Hargreaves, president of Delmarva Poultry Industries, Inc.

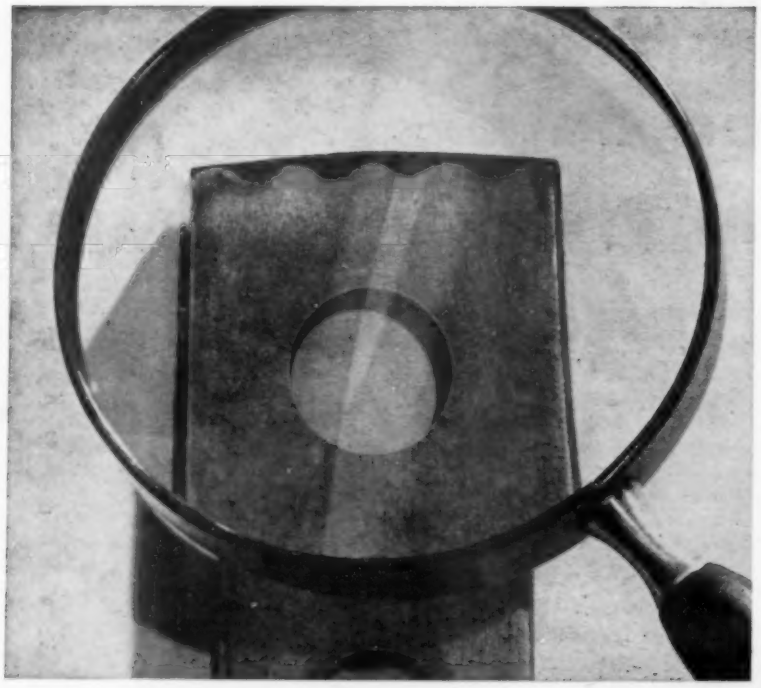
More than 2,000 attended the first-day activities, including J. Caleb Boggs, governor of Delaware, and Elbert N. Carvel, former Delaware governor.

The festival's "national senior chicken cooking contest" was won by Mrs. Barbara Marks, a 32-year-old housewife from Wantagh, Long Island, N.Y. She received $500 in cash, a new $500 range, a trophy from the Poultry & Egg National Board and an engraved silver tray.

James W. Shaw, mayor of Federalsburg, Md., was crowned barbeque king of the festival. He said he developed his prize recipe while experimenting over his backyard grill.

The three-day affair ended with a two-hour parade of floats, bands, fire trucks and marching units.

PACAL



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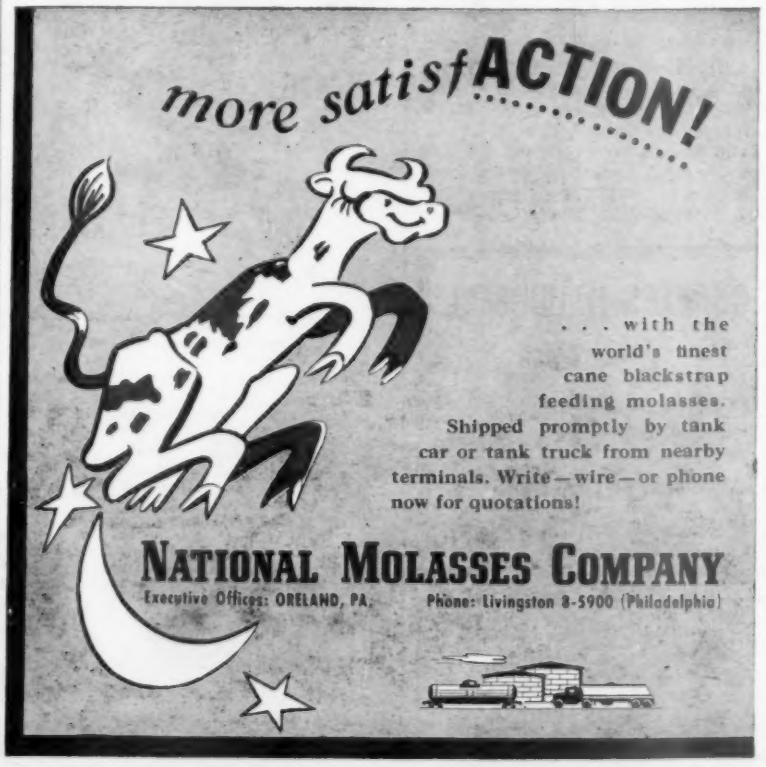
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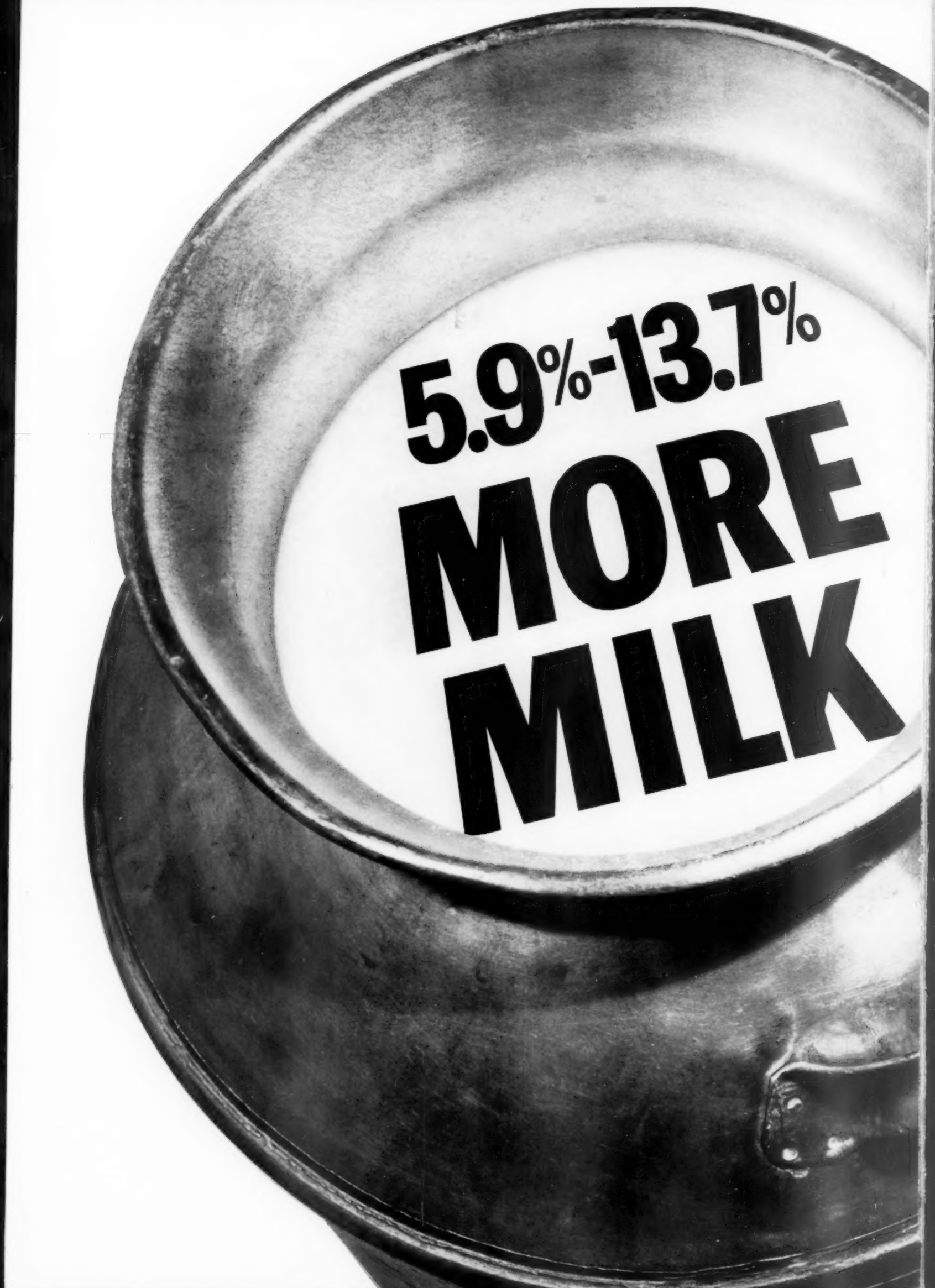

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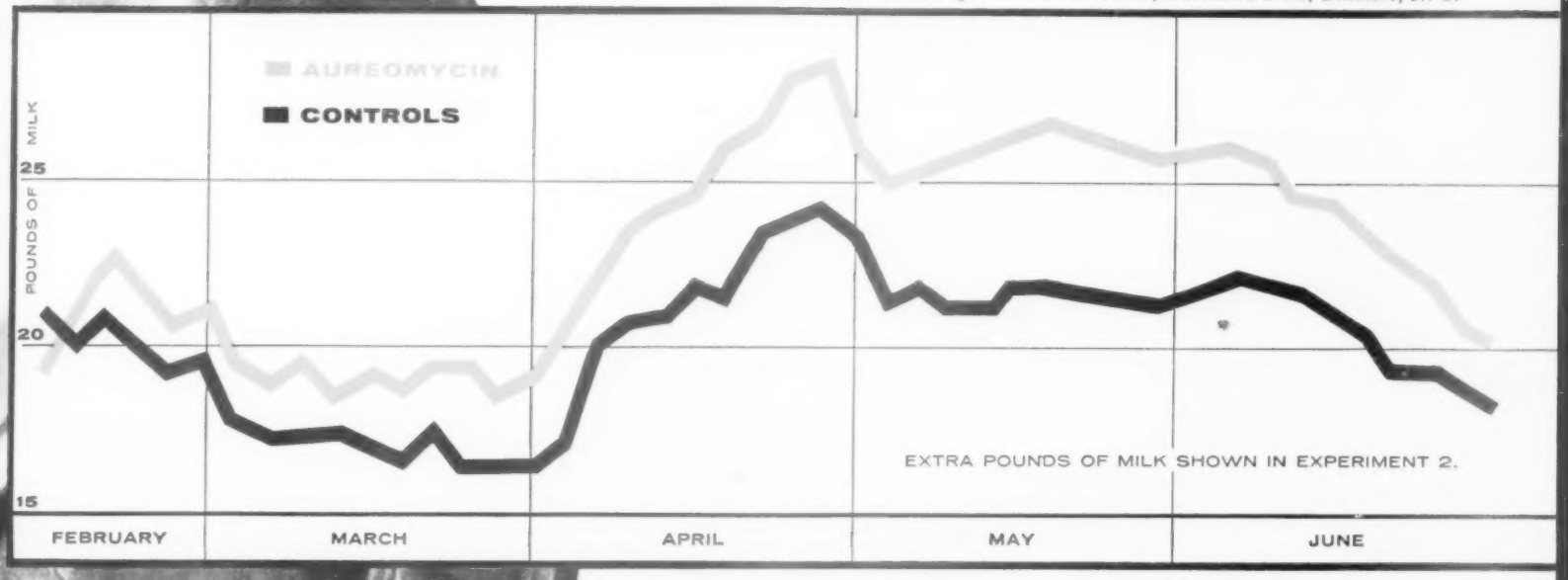
Shown in 2 controlled experiments* with Aureomycin® in dairy feeds

*Conducted by Dr. A. B. Christian, Biltmore Farms, Biltmore, N. C.



Here's proof that AUREOMYCIN in dairy feeds can pay off in bigger milk checks for your customers —and in higher dairy feed volume for you!

These 120-day experiments were conducted in a commercial dairy herd. During the final 75 days the cows were on pasture. 30 cows were used in each experiment and divided into 2 paired groups of 15 cows each. All cows were selected at random from a group standardized with respect to number of previous lactations, stage of present lactation, age and breeding.

One group of cows in each experiment received no AUREOMYCIN in the ration. The other group received AUREOMYCIN Chlortetracycline at the level of one-tenth of a milligram per pound of body weight daily. Cows receiving AUREOMYCIN in experiment 1 averaged 5.9% more milk than the controls. Cows in experiment 2 averaged 13.7% more milk than the controls.

If you are not now making a dairy feed containing AUREOMYCIN—plan to do so. Build dairy feed volume—the potential is tremendous! If you want further information on the use of AUREOMYCIN in dairy feeds, please write.

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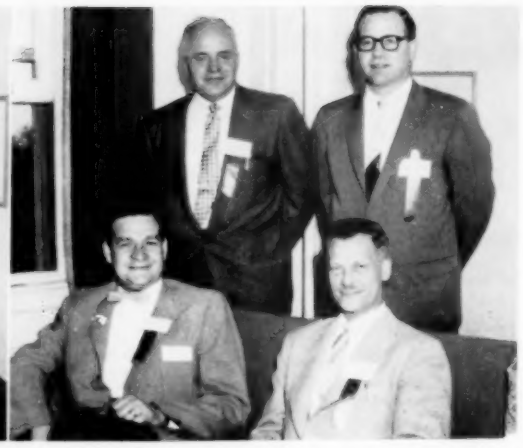

COMMITTEE MEN—Here are several of the feed men who were on the committees responsible for planning and carrying out the Alouette convention of the Canadian Feed Manufacturers Assn. at Murray Bay, Quebec. Seated, left to right, in the first photo are D. R. Kennedy, Ogilvie Flour Mills Co.; Jacques de Broin, Pioneer Feeds, the general chairman, and John McAnulty, Ralston Purina Co., retiring National Council president. Standing, W. J. Kennedy, Robin Hood Flour Mills, and G. R. de Cotret, Parrish & Heimbecker. In the second photo, seated are Lucien Lafortune, E. W. Caron & Cie, and D. M. Smythe, Canada Packers. Standing are Leo Caron, Canada West Indies Molasses Co., and A. J. Scott, Ogilvie Flour Mills Co. All are from Montreal.

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Oregon Tests Feed Mix for Control Of Coccidiosis

CORVALLIS, ORE.—A feed mixture to which coccidia have been added has given coccidiosis control for chicks fed this ration, according to veterinary researchers at Oregon State College.

In a report on this work in the college experiment station publication, Oregon's Agricultural Progress, Dr. E. M. Dickinson and his coworkers outlined this experimental work:

"For the feeding program a measured composite of coccidia culture and a suitable feed were mixed and fed directly to 5-10 day old chicks. Number of coccidia that must be consumed to produce the needed resistance against severe infection was determined before feeding was made.

"Twenty-four to 36 hours after feeding coccidia mash the birds were given an additional feed containing .05% sulfaquinoxaline. This combats severe coccidiosis that can develop with the large dosages of coccidia needed for immunity.

"Workers fed chicks coccidiostatic mash for six days, then discontinued. Following this feeding plan, chicks have resistance to the five common coccidia species used in the mash, the researchers reported.

"Field trials show that other feed should be taken away from chickens two hours before they receive coccidia feed. This insures a uniform consumption.

"To get the best feeding results litters should be cleaned out or covered with 1 to 2 in. of clean litter when hoppers are taken out to prepare the coccidia feed mixture.

"Researchers find that occasionally a grower starts chicks on the coccidiostatic mash. Under such conditions some of these feeds will prevent coccidia feed from initiating the infection necessary to stimulate immunity.

"Coccidia feeds are still in experimental form and not available for general use," the report concludes.

Lindsey-Robinson Has Sales, Service Meeting

ROANOKE, VA.—Field personnel of the Fair-Acre Feeds division of Lindsey-Robinson & Co., Roanoke, recently attended a two-day sales and service conference at the firm's headquarters.

The company holds the conferences quarterly to present new programs on livestock and poultry feeding and service. Sales and service personnel discuss and study the latest technical, managerial and nutritional advances in the Southeast's agricultural industry.

Regional and district managers and farm service agents from Maryland to Georgia attended.

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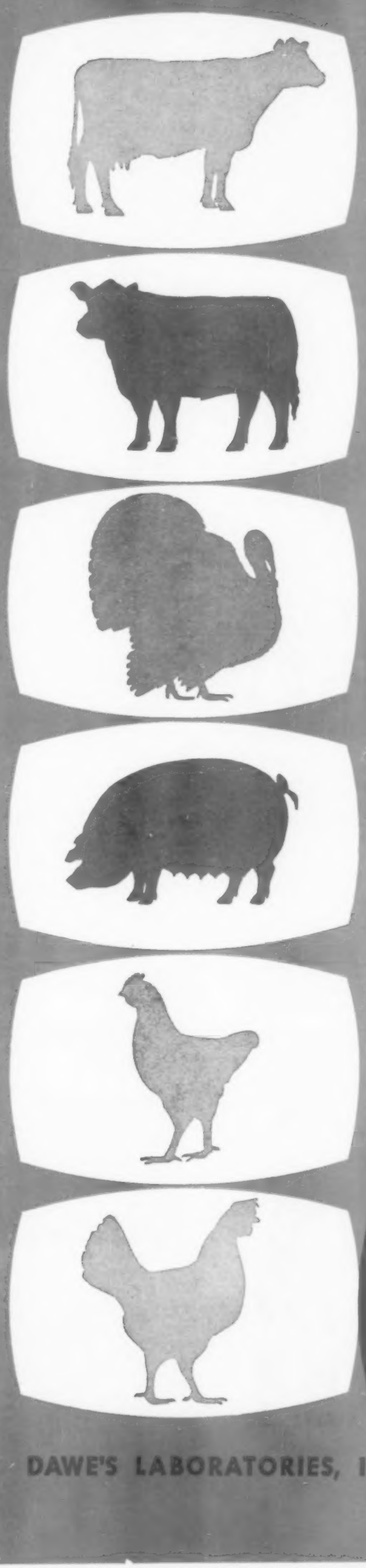

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Results of Livestock Feeding Research Reported at Oklahoma State University

STILLWATER, OKLA.—Researchers at Oklahoma State University recently reported on a number of livestock feeding experiments.

Scientists making the reports included R. F. Hendrickson, L. S. Pope, A. B. Nelson, Jack McCroskey, Dwight Stephens, A. D. Tillman, George Waller, Kenneth Urban, W. D. Campbell, Robert L. Noble, Richard Pittman, George Waller, Jr., J. E. Zimmerman, J. R. LeGendre, George Odell, J. C. Hillier, J. J. Martin, N. W. Robinson, and Lowell Walters.

Summaries of the reports are as follows:

Stilbestrol for Suckling Beef Calves: Four trials were conducted with young suckling beef calves to study the effect of feeding 5 mg. stilbestrol per head daily or implanting two 12 mg. pellets.

Except for one lot, gains were increased in every case by administration of stilbestrol. In these studies, greater increases in gain were obtained from implanting than from feeding, but undesirable side effects were found with the former method, particularly after the second implant was given.

Phosphorus Requirements of Fattening Yearling Steers: A fattening trial was conducted involving 60 long-yearling steers fed high-silage rations containing approximately .2, .3 and .4% phosphorus in the dry matter of the ration. Results from the 150-day test indicate that the basal ration, containing about .2% phosphorus, was adequate, as evidenced by daily gains, feed consumption and feed required per 100 lb. gain.

Effect of Pelleting Roughage for Beef Calves: Four lots of six calves each were used to test the effects of pelleting roughage on rate and efficiency of gain. During the 108-day feeding period the calves were fed roughage on a free-choice basis and in controlled amounts, both in the pelleted and chopped forms.

One lot of four calves was given a choice of both forms of roughage, free-choice. Cattle fed pelleted roughage, free-choice, ate only slightly more feed than those fed chopped roughage.

Greatest gains were obtained from cattle fed roughage in the chopped form, either when fed in controlled amounts or on a free-choice basis. When given a choice of pellets and chopped roughage, the calves preferred the pelleted form about 2.2 to 1.

Effect of Stilbestrol Implants on Gains of Steers Grazing Native Grass and Their Subsequent Feed-Lot Performance: Implantation of 36 mg. of stilbestrol increased the gains of yearling steers grazing native grass.

In the 107-day period the implants increased gains 13.9% and 10.4% for cattle not fed and fed supplemental milo, respectively, or an average of 24 lb. per steer.

Following the pasture tests, the steers were fed high-silage rations with limited amounts of grain and supplements containing stilbestrol for 192 days in dry lot.

At the start of the fattening period, there was an advantage of 32 lb. per steer for stilbestrol-implanted cattle. Control steers outgained those implanted during the previous summer by .07 lb. per head daily or 13 lb. per steer, during the fattening phase.

Under the conditions of this study, approximately 40% of the improvement in gains on summer pasture from stilbestrol implantation had disappeared after 192 days in dry lot.

Fattening Trial with Western Feeder Lambs in Dry Lot: Ten lots of lambs were used to study various methods of fattening feeder lambs, making maximum use of home-grown feeds.

Results of the tests indicated that pelleting the entire ration increased average daily gains by about .06 lb. per day. However, the lambs fed the mixture required about 20 lb. less feed per cwt. gain. Average daily feed consumption was .5 lb. higher for the lambs fed the pellets.

Due to the cost of pelleting ($3 a ton) and the increased efficiency of feed utilization, the feed cost per cwt. of gain was about $1 cheaper for the lambs fed the mixture.

The lambs self-fed long alfalfa hay and whole milo gained approximately .15 lb. less than the groups fed the mixture or pellets. These lambs also required more feed per cwt. gain and the feed cost per cwt. was greater.

Considering all lots of lambs, stilbestrol increased average daily gain by about 21%.

One lamb out of the 255 implanted (this includes those implanted on

(Continued on page 56)

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Year after year, Simonsen engineers are constantly making every effort to design a better spreader. As a result, old methods have become obsolete compared to the new modern advancements of the Simonsen Fertilizer Spreader.

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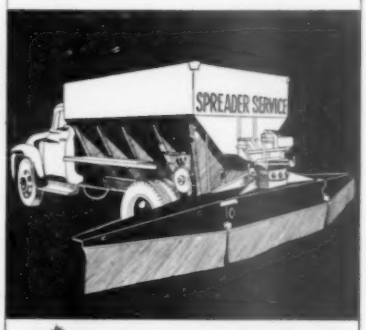

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- Hydraulic fan drive.
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- Compartment hinges on the outside.
- Boom shock absorbers.
- Grease-less bearings.
- Better weight distribution.

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SIMONSEN MANUFACTURING COMPANY

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LIPAMONE OPENS UP NEW MARKET FOR ALERT FEED MEN

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"It's in-the-feed"

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Agricultural Division
WHITE LABORATORIES, INC.
Kenilworth, N. J.

DELMARVA QUEEN — Helen Lee Pittard, Georgetown, Del., became Miss Delmarva the 11th at the recent Delmarva Chicken Festival in Denton, Md. She was crowned by J. Caleb Boggs, governor of Delaware.

Camera Views of the News

AFMA DAIRY SCIENCE AWARD—Dr. C. A. Lassiter, Michigan State University dairy scientist, center, winner of the 1958 American Feed Manufacturers Assn. $1,000 award for outstanding contribution to dairy nutrition research, receives congratulations here from W. T. Diamond, left, secretary-treasurer of AFMA, and Dr. J. C. Shaw, University of Maryland. Mr. Diamond presented the check for AFMA at the 53rd annual American Dairy Science Assn. meeting at North Carolina State College, while Dr. Shaw was 1956 winner of the same award and chairman of this year's selection committee. All three are also members of the dairy science group.

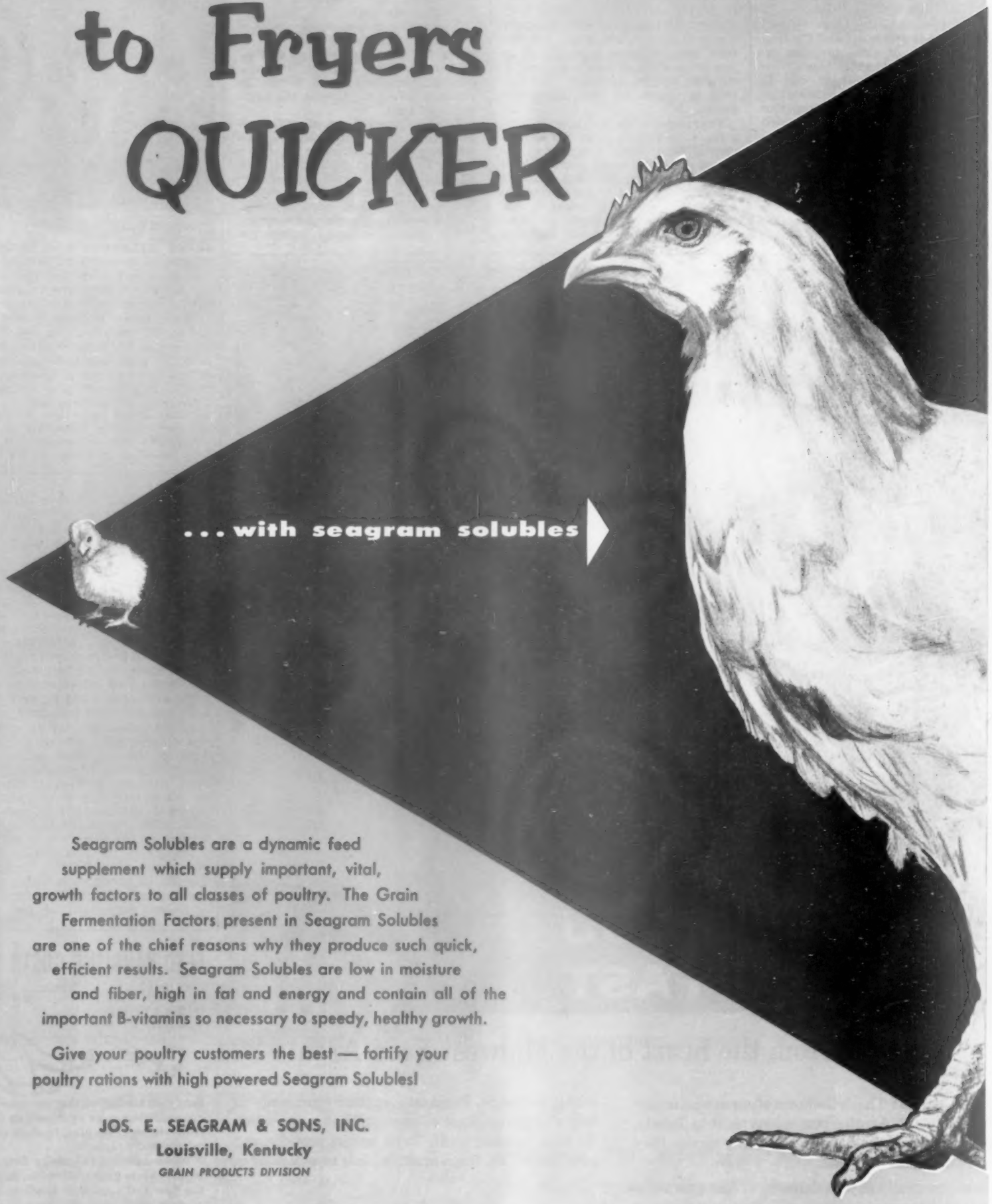
G.L.F. PROMOTES MILK—Shown at left in the photo above is one of 53 billboard drink-milk reminders that millions of motorists are seeing in New York, New Jersey and northern Pennsylvania. The campaign, sponsored by G.L.F., also includes special radio jingles on 15 stations and special postal slugs for an estimated half-million pieces of mail.

NEW PLANT—More than 75 dealers, their staffs and wives were guests of Kent Feeds, Inc., at the opening ceremonies of the new Kent "Feed-Matic" plant just south of Sioux City, Iowa, recently. The day-long event included a plant tour, dinner at the Normandy Restaurant and a dance at Shoreacres Ballroom in Sioux City. At the dinner Kent officials announced a contest involving 350 prizes. Top prize will be a new pick-up truck. G. A. Kent, president of the company, conducted the plant tour.

OCCUPIES NEW PLANT—Tamms Industries Co., Chicago, has moved into its new plant at McCook, Ill., according to an announcement by E. E. Troyer, president. The plant has approximately 40,000 sq. ft. which will be used for manufacturing Tamms' red and yellow iron oxide for the feed trade and for warehousing other items produced at other points and distributed in the Chicago area. The new plant also includes a complete research and development laboratory. General offices of the firm are located at 228 N. La Salle St., Chicago.

POULTRY PRINCESS—A chicken filet dinner, television personality George Gobel and 21 poultry princess candidates clad in swim suits attracted more than 800 poultry industry representatives to the recent $50-a-plate Poultry Coronation Banquet sponsored by the Georgia Poultry Federation in Atlanta. Chosen as poultry princess was Diane Gail Austin (center), 19, Atlanta, described in a federation report as "a green-eyed blonde baton twirling specialist." On the left is Mr. Gobel, and on the right is A. A. Fowler, Douglasville, Ga., president of the federation. Miss Austin will represent Georgia in the Miss Universe contest in Long Beach, Cal. She also won a wardrobe and a $1,000 cash prize. The fund-raising event was said to be one of the largest poultry promotions ever held in the South. Mr. Fowler said the funds will be used to implement a hard-hitting promotional and legislative program.

Chicks to Fryers QUICKER



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Seagram Solubles are a dynamic feed supplement which supply important, vital, growth factors to all classes of poultry. The Grain Fermentation Factors present in Seagram Solubles are one of the chief reasons why they produce such quick, efficient results. Seagram Solubles are low in moisture and fiber, high in fat and energy and contain all of the important B-vitamins so necessary to speedy, healthy growth.

Give your poultry customers the best — fortify your poultry rations with high powered Seagram Solubles!

JOS. E. SEAGRAM & SONS, INC.
Louisville, Kentucky
GRAIN PRODUCTS DIVISION

Seagram SERVICE TO AGRICULTURE

wheat pasture) died from a blockage of the urinary tract. Most of the increase in gain due to stilbestrol came during the first part of the feeding period. Stilbestrol decreased dressing percentage and carcass grade (less than ⅓ grade) slightly in most instances.

Aureomycin increased average daily gains and feed efficiency of each group of lambs except those fed the high roughage ration.

The average daily gain of all groups was satisfactory, and the feed cost per cwt. of gain, in most instances, was considerably lower than the selling price. However, due to initial cost, death loss, shrinkage, miscellaneous costs, and negative margin, practically all groups showed a net loss.

Effect of Different Levels of Winter Supplement and Age at First Calving Upon the Performance of Beef Cows and Replacement Heifers: The results of the ninth consecutive year in a long-time study on the effects of low, medium and high levels of supplemental feed on the performance of range beef cows are presented.

Data obtained indicate a slight effect of level of winter feed on mature weight of the cows, but no significant difference on birth or weaning weight of the calves.

There has been a trend for the low level lots to calve slightly later, but to wean a larger percent calf crop. The cost per cwt. of calf weaned has been least for those cows wintered at the low level, and has been less for those calving first as two-year-olds than for the cows calving first as three-year-olds. The first trial is now in its 10th consecutive year.

Four repetitions are now in progress with heifers from the experimental herd. Body weight was affected somewhat in all trials by level of winter feeding. However, summer gains have tended to compensate to a large extent for differences in winter gain. Weaning weights of calves from the second and third trials were increased by higher levels of winter feed, but the differences in weaning weight were not great enough to pay for the extra feed cost of the medium and high levels.

Stilbestrol and Urea in Rations for Wintering Beef Cattle: The value of stilbestrol and urea in rations for wintering beef cattle and the subsequent performance of calves previously administered stilbestrol were studied in six trials.

Cattle fed a urea-containing supplement (40% protein) did not gain as much as those fed pelleted cottonseed meal. The addition of trace minerals, aureomycin or certain B vitamins failed to increase the utilization of urea.

The feeding of 5 mg. of stilbestrol to calves fed prairie hay and cottonseed meal had little effect on winter gains. Implanting steer calves with 12 or 24 mg. of stilbestrol apparently slightly decreased winter weight losses of steer calves fed protein supplements while grazing native grass.

The subsequent winter weight loss of calves which had been implanted with stilbestrol during the previous summer was slightly less than the gains of those not previously implanted.

Philip S. Wright

JOINS SALSBURY'S — Philip S. Wright, a specialist in product development and marketing, has joined Dr. Salsbury's Laboratories, Charles City, Iowa, as product manager for package goods. Herman G. Bos, director of marketing for Dr. Salsbury's, said Mr. Wright's appointment is in line with an expansion program in the marketing division. Mr. Wright is a graduate of Marquette University, Milwaukee, and he has his master's degree in biological science from the University of Illinois. Since graduation, he has had four years of experience in the field.

Effect of Rapid vs. Moderate Rates of Gain on Feed Efficiency and Carcass Composition of Steer Calves: The results from the first in a series of fattening trials to determine the effect of different rates of gain on efficiency of feed conversion and carcass composition are reported.

Sixteen steer calves were individually fed to make 365 lb. total feedlot gain. One group of four calves was fed so as to gain at each of the following rates: High throughout; high for one half total feedlot gain and then moderately; moderately and then high, and moderately throughout. The high level of gain was achieved by feeding 2 lb. milo per cwt., while calves fed to gain at a moderate rate received 1 lb. per cwt.

Results of the first trial indicate that steer calves fed to gain rapidly for 365 lb. produced a higher grading carcass, with more marbling and a higher percentage of fat. Such

. . . right from the heart of the Midwest Feed Area!

Kansas City! That's the home of our newest multiwall bag plant. Another convenient plant in Toledo, too. You'll like the kind of packaging service they offer you because it's *fast*.

We're practically at your doorstep . . . can *guarantee* on-time delivery via truck or rail. Extensive facilities enable us to handle even your most urgent needs.

St. Regis bags are designed for maximum brand and product identification. Use of top-quality kraft and printing equipment assures clear, crisp reproduction that pays off.

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FEED HANDLING COSTS CUT with VIBRATORS

Feed men are finding they can materially cut operating costs by installing Cleveland Vibrators on bins, loading chutes, mixers and weighers.

When handled in gravity flow bins, grain tends to pack and bridge, stopping the flow and causing a needless waste of time. This plugging effect is worse when liquid fortifiers such as molasses are added.

The constant jiggling supplied by a Cleveland Vibrator keeps the feed in motion. There is no opportunity for the individual grains to stick to each other. Cleveland Vibrators eliminate plugging before it gets started.

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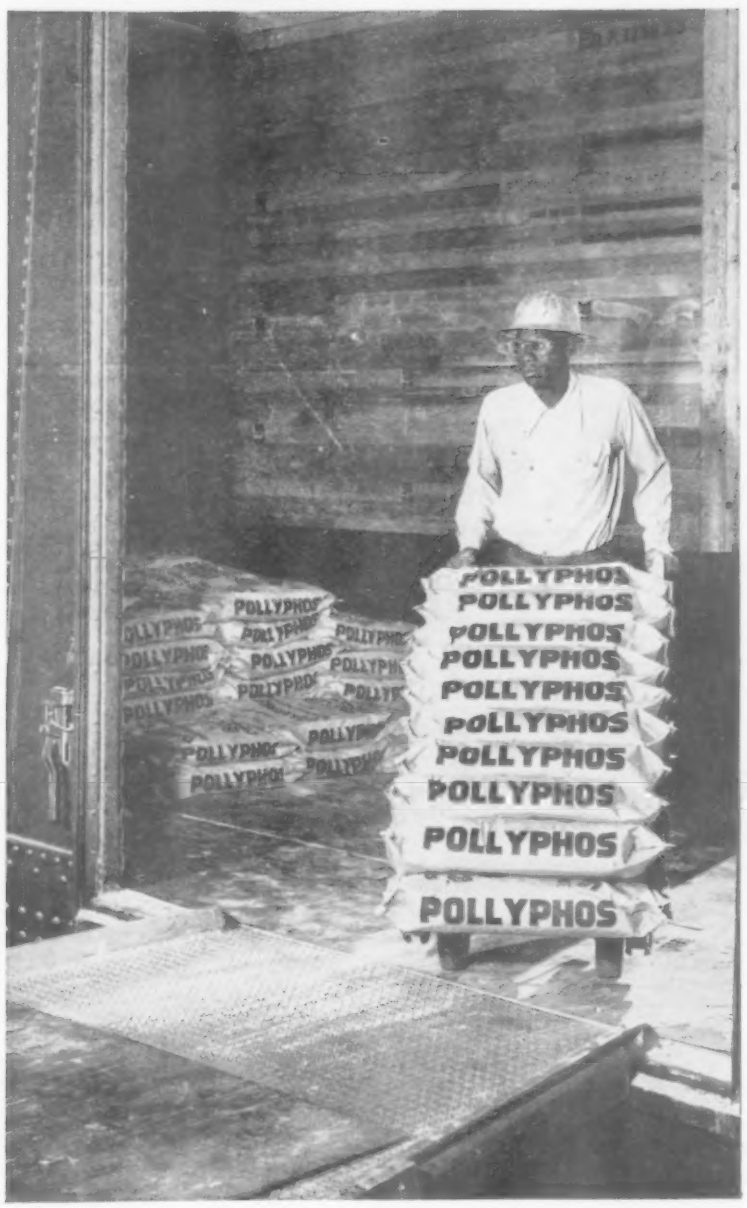

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Butler Chemical Company offers a defluorinated phosphate . . . POLLYPHOS . . . containing the highest phosphorus content . . . 19% . . . at the *lowest delivered cost* per unit of phosphorus . . . to feed and mineral manufacturers located in the western half of the United States.

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treatment, however, resulted in less efficient conversion of digestible nutrients to gain, less round, smaller rib eye area and less lean tissue in the carcass.

Gains and carcass desirability of the moderately-fed group proved very encouraging for this type of feeding regime. Changing from high to moderate, or the reverse, after one half of the feedlot gain had been achieved, generally gave results intermediate to feeding for either high or moderate gains throughout. It appears that the high-moderate treatment may be the least desirable of the four methods studied.

Mixed Rations vs. the Free-Choice Feeding of Milo and Supplement for Growing and Finishing Pigs: The pigs used in these trials were started on feed shortly after they were weaned, averaging nine to ten weeks of age; all were gilts.

Two mixed rations and four free-choice rations were compared. Results indicate that the advantage of feeding mixed ration over the free-choice feeding of milo and supplement is small from the standpoint of both rate and economy of gain. Also, the supplement must be compounded specifically to meet the deficiencies of the grain with which it is to be fed.

The relative palatability of the grain and supplement is an important factor to consider. The addition of fish meal to a milo-soy meal type of basal ration did not improve the rate or economy of gain to any appreciable extent, and proved to be uneconomical. Replacing alfalfa meal in the supplement with vitamin A acetate, as a source of this vitamin, improved the gain slightly and reduced the feed required per unit of gain by 7-10%.

Levels of Supplemental Winter Feeding of Beef Cows and Creep-Feeding Fall Calves: Cows which had previously produced at least one calf before being placed in the experiment have been fed 1.5 lb. of pelleted cottonseed meal or 5.5 lb. of a pelleted mixture of 2.5 lb. cottonseed meal and 3 lb. ground milo. The calves produced by one group of cows within each level of wintering have been creep-fed.

The three-year average increase in gain from creep-feeding was 58 lb. Also, the high level of winter feeding of the cow increased calf gains 29 lb. Neither practice was profitable when costs prevailing during the time of the tests were considered. Preliminary results obtained during the fourth test and with 2.5-year-old heifers are presented.

Effect of Rolling vs. Pelleting Milo, Previous Implantation, and Certain Feed Additives on the Feedlot Performance of Steer and Heifer Calves: Fattening trials with heifer calves indicate that finely-ground and pelleted milo may improve gains and feed efficiency over rolled milo at a rate sufficient to more than offset the added cost of feed preparation.

Steer calves receiving 2.5 lb. cottonseed meal per head daily showed increased gain and feed efficiency as compared to calves receiving only 1.5 lb. Adding a low level of antibiotic (Ilotycin) or two tranquilizers to the daily ration gave only small increases in gain.

Heifer calves previously implanted with stilbestrol as suckling calves out-gained their controls during the fattening period, while steer calves gained slightly less. Both groups showed greater net return than their controls.

Fattening Steers and Heifers on Rations Containing Different Levels of Concentrate: The third in a series of trials with long-aged steer and heifer calves was conducted to study the effect of self-fed mixtures varying from 35 to 80% concentrate on gains, feed efficiency and carcass merit. Only small differences were observed among the lots due to the rations fed.

Although the mixtures containing higher levels of concentrate supplied more total digestible nutrients (TDN) per pound of ration, feed intake among the lots was such that actual TDN intake was similar. Thus there were relatively small differences in rate of gain, TDN per cwt. gain, days on feed required to reach a slaughter grade or carcass grades of the cattle.

A lowering of dressing percentage was noted on the two extreme mixtures (35 and 80% concentrate). Steers outgained heifers and converted feed more efficiently, but were less profitable due to lower carcass grade and higher initial cost.

Lionel O. Wells

JOINS HESS & CLARK—Lionel O. Wells has been added to the sales force of Hess & Clark, Inc., Ashland, Ohio, as a sales representative for the feed products division in the state of Michigan. He will contact feed manufacturers on behalf of Hess & Clark feed medication products—nf-180, NFZ, Bifuran and others. Mr. Wells is a June graduate of Ohio State University, where he received a bachelor of science degree in agricultural economics. He received the 1958 Wall Street Journal award as the outstanding graduate in agricultural economics at Ohio State.

Your feeds supply these extra performance factors when they contain Tenox BHT

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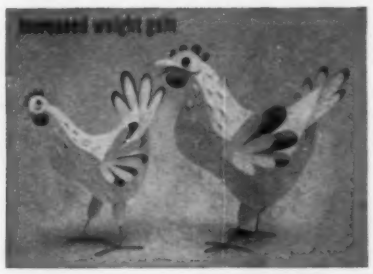

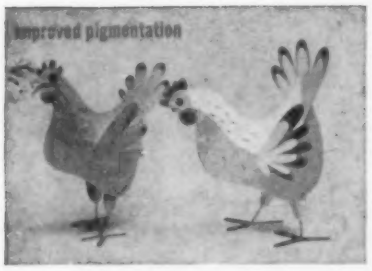

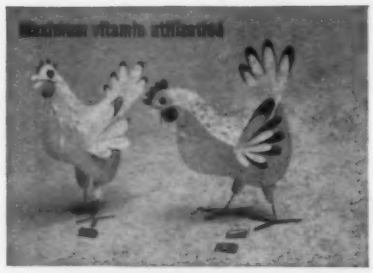

Here are four sound reasons for incorporating Tenox BHT-Agricultural Grade into your feeds.

Tenox BHT **protects the all-important vitamin balance you build into your feeds.**

Tenox BHT **improves pigmentation in poultry by increasing the utilization of Vitamin A.**

Tenox BHT **increases weight gain by maintaining maximum nutritional content right up to the time the feed is used.**

Tenox BHT **protects poultry against certain deficiency diseases.**

Tenox BHT-Agricultural Grade is free-flowing, non-dusting, non-caking. Its particle size is similar to that of other feed ingredients. It blends quickly and does not separate during handling or storage.

Tenox BHT-Agricultural Grade was developed to meet the specific needs of poultry feed manufacturers. It is the result of information provided by feed manufacturers combined with our own extensive knowledge of antioxidant performance.

Build extra performance into your feeds by specifying the antioxidant specially made by Eastman for feed use...Tenox BHT-Agricultural Grade. Tenox BHT-Agricultural Grade is available from leading distributors throughout the country. To find out how you can use this antioxidant in your feed formulations, write today to EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of the Eastman Kodak Company, KINGSPORT, TENNESSEE.

Tenox BHT-Agricultural Grade available in 2 forms

1. Tenox BHT (Conc.)-Agricultural Grade which may be added to your own diluent.
2. 25% Tenox BHT Premix, containing 25% BHT on a nutritive cereal carrier.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; New York City, 260 Madison Ave.; Framingham, Massachusetts, 65 Concord St.; Cincinnati, 1813 Carew Tower; Cleveland, 13212 Shaker Square; Chicago, 4200 Dempster St., Skokie, Illinois; St. Louis, 10 South Brentwood Boulevard; Houston, 1300 Main St. **West Coast:** Wilson Meyer Co., San Francisco, 333 Montgomery St.; Los Angeles, 2060 South Garfield Ave.; Portland, 520 Southwest Sixth Ave.; Salt Lake City, 73 South Main St.; Seattle, 318 Queen Anne Ave.; Denver, 851 North Broadway; Phoenix, 111 West Osborn Road. **Canada:** P. N. Soden Co., Ltd., Montreal, Quebec, 2143 St. Patrick St.; Toronto, Ontario, 41 Advance Road.

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. . . cuts death losses
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From poult to processor,

furazolidone nf-180

prevents and diseases than

Start poults on 2 pounds of nf-180 per ton of total feed

Poults off to a fast, healthy start have a much better chance to finish out at top grade . . . return more profit over cost. Every one that dies is an outright profit loss . . . every poult you protect from early-life disease is a potential money-maker for you. That's why disease-fighting benefits of furazolidone (nf-180) pay off big. Fortified with nf-180, turkey starter feeds protect poults from a wide range of diseases. In fact, no other drug (antibiotic, sulfa, arsenical . . . anything) prevents and controls as many diseases as furazolidone.

Disease hazards face a poult from the day it is hatched. Egg-transmitted diseases may even endanger the young poult's life before it gets a start . . . may cause heavy early week mortality.

nf-180 fed at 2 pounds per ton of total feed, markedly reduces losses due to egg-transmissible diseases. In addition, it helps poults fight both identified and unidentified or sub-clinical diseases to which they are continually exposed. Free of the constant disease fight, your poults make better use of feed. For example, tests at a Midwestern university showed furazolidone gave 8% better feed conversion. Proof that poults grow faster, reach selling weight with a market-topping "furazolidone finish."

The cost of this wide-range disease protection is about 4½¢ per poult...for disease and stress protection from day-old to 8 weeks. Only a few cents more protects a bird all the way to market.

Continuous nf-180 protective feeding for growing and finishing

Even with the best management, dangerous stress periods and unexpected disease outbreaks can occur any time . . . break through flock resistance and cause heavy mortality.

That's where continued protective feeding with furazolidone fits into turkey growing profit plans. Continuous protective feeding of this lifesaving nitrofuran is an "internal management" program . . . provides birds with the extra resistance they need to fight off disease and keep gaining through stress periods.

Four years of testing at the University of Minnesota showed that in addition to superior disease protection, continuous nf-180 protective feeding improved feed conversion . . . stepped up growth rate, and reduced total mortality by 11 percent. Birds also showed a better finish. Researchers found that furazolidone protected birds required 8 lbs. less feed to reach market weight, saving about 3 cents feeding cost per pound of gain.

And furazolidone (nf-180) does its disease-fighting job in a unique way — by starving germs — letting no resistant strains build up. Furazolidone is used up as it works . . . there is no waste or harmful side effects. It's safe to use throughout the entire life of your flock . . . and with birds of all ages, including breeders.

controls more turkey any other drug...

Comparison of furazolidone (nf-180) with other drugs used in turkey feed medication

DRUG	Growth Stimulation	Typhoid & Pullorum	Paracolon	Para-typhoid	C.R.D. Sinusitis	Blue Comb	Hexa-mitiasis	Synovitis	Ulcerative Enteritis (Quail Disease)	Black-head	Stress Periods
*nf-180 (furazolidone) Level (grams)	YES 7½-10	YES P-50 T-100	YES P-100 T-150	YES P-50 T-100-200	YES P-50 T-100	YES P-50 T-100	YES P-100 T-100	YES P-50 T-200	YES P-50 T-100	YES P-100 T-150	YES P-50 T-100
Chlortetracycline Level (grams)	YES 7-10	NO	NO	NO	YES P-50 T-100	YES P-50 T-100	YES P-50 T-100	YES P-100 T-200	NO	NO	YES P-50 T-100
Oxytetracycline Level (grams)	YES 7-10	NO	NO	NO	YES P-50 T-100	YES P-50 T-100	YES P-50 T-100	YES P-100 T-200	NO	NO	YES 50
Bacitracin Level (grams)	YES 7-10	NO	NO	NO	YES P-50 T-100	YES P-50 T-100	NO	NO	NO	NO	YES P-50 T-100
Penicillin and Streptomycin Level (grams)	YES 2-5 (for penicillin)	NO	NO	NO	YES 75 Strep 25 Pen	YES 75 Strep 25 Pen	YES 75 Strep 25 Pen	NO	NO	NO	NO
Penicillin Level (grams)	YES 2-5	NO	NO	NO	YES T-100	YES T-100	NO	NO	NO	NO	NO
Penicillin and Bacitracin — 37½B plus 12½P Level (grams)	YES 5 Bac 1 Pen	NO	NO	NO	YES P-50	YES P-50	NO	NO	NO	NO	YES P-50 T-100
Erythromycin Stearate	NO	NO	NO	NO	P-? T-YES	P-? T-YES	NO	P-? T-YES	NO	NO	NO
2 – Acetylamino 5 – Nitrothiazole	NO	NO	NO	NO	NO	NO	NO	NO	NO	P-YES T-YES	NO
4 - Nitrophenyl Arsonic Acid	NO	NO	NO	NO	NO	NO	NO	NO	NO	P-YES T-NO	NO
A Sulfa—Tin—Arsenical Combination	YES	P - ? T - NO	NO	NO	NO	P-YES T-NO	P-YES T-NO	NO	NO	NO	NO

KEY: P: Prevention level in grams per ton of complete feed
T: Treatment level in grams per ton of complete feed

*Each pound of nf-180 contains 50 grams of furazolidone

Why take chances with drugs that fight only one or two diseases? Seldom do diseases strike singly. Associated diseases and opportunist organisms are usually waiting to attack weakened birds. Furazolidone is the *one* drug . . . the only one . . . offering wide-range effectiveness. It prevents and controls: Blackhead, typhoid, paratyphoid, pullorum, paracolon, hexamitiasis, CRD (air sac), blue comb (nonspecific enteritis), and synovitis.

Besides these specific diseases, there are a host of hard-to-diagnose, hidden infections that sap vitality and retard growth . . . rob your birds of energy even when they may seem to be doing all right. Furazolidone protects birds against stress. Growers find that continuous feeding of nf-180 keeps most sub-clinical infections well below the danger level. Furazolidone is palatable . . . stimulates feed intake, improves growth and feed conversion.

Turkey growers report on nf-180:

"Had 96.7% livability on 15,000"

Last year this grower started 15,000 T. Whites on 2 lb. nf-180 in the feed. Liked growth and livability up to ranging time, decided to continue with 2 lb. level in feed right on to finish. Said: "Results were wonderful . . . no real disease outbreaks at all . . . sold 14,540 birds . . . 96.7% livability . . . the best we ever had." This year started 15,000 more on 2 lb. nf-180 in feed. Got up to 12 weeks without a disease problem. Then grower changed to a new drug given him *free* to try in his feed to prevent blackhead. He had some blackhead outbreaks, and reported: "It didn't do the job nf-180 did. Even free, this new drug cost us money to use. We'll go back to nf-180."

"nf-180 gave us trouble-free season"

Turkey broiler grower had 8,000 on 2 lb. level of nf-180 from start to finish. Got to market without any disease troubles. Then put in another 8,000 for regular market. Kept these on 2 lb. level for 14 weeks and dropped to 1 lb. nf-180 per ton on to finishing. This flock just as trouble-free as first one.

"We wouldn't be without it"

Grower keeps poults on feed with 2 lb. nf-180 all through brooding period and first week on range. This stopped most all early mortality. During growing period he uses 2 lb. nf-180 stress feed whenever birds look like they need it. Says: "We like this protection . . . wouldn't be without nf-180."

"Practically stopped paracolon losses"

Paracolon losses among poults had this grower in real trouble. His state lab recommended starting birds on 2 lb. level of nf-180. Said: "nf-180 practically eliminated death losses from this disease. Poults made better gains and we got by on less feed."

"nf-180 pulled us through tight year"

Grower reported: "We couldn't have stood our usual mortality losses this year the way prices were. Using nf-180 kept disease down so we came through with very little trouble. Better feed conversion saved us money and our birds finished out well. Got a top price. Don't believe we could afford to raise turkeys without nf-180, especially in a tight year."

"Finished best flock in years"

This grower's last flock had made poor gains, suffered frequent off-feed periods and disease setbacks. His feed serviceman suggested nf-180 in the feed this year to prevent these troubles. Birds were started on 2 lb. level nf-180 feed and kept on it all through brooding period. Grower liked the size, vigor and livability of his flock so well he decided to continue 2 lb. level on to marketing. "Our death losses were the lowest and finish the best we'd had in years," he said.

For positive disease control . . . better turkeys, bigger profits, ask your feed man for furazolidone-fortified turkey feeds.

Consider the disease protection offered by a furazolidone (nf-180) medication program, and you'll want to join the many successful nf-180 users. Here are feed medication plans that fit your needs:

1. **STARTING PERIOD** . . . use 2 lb. level nf-180 in all feed from start, through brooding period and first week on range.

2. **GROWING-FINISHING PERIOD** . . . check your past history and local area disease problems. Choose the protective feeding plan you need:

- 2 lb. level nf-180 continuously should be used to protect against blackhead, hexamitiasis and other diseases.
- 1 lb. level nf-180 continuously* gives wide protection against stress and most diseases where blackhead and hexamitiasis are not likely problems.
- week-a-month plan* for areas where disease is not a serious problem. Many growers report good luck using a 2 lb. level nf-180 stress feed one week a month to clean up birds, fight stresses, and knock out disease organisms before they can build up and trigger trouble.

*If disease outbreaks should occur on these low-level nf-180 plans, higher levels (2, 3 and 4-lb. nf-180 per ton) can be used as specific treatments. Ask your feed man for proper levels and lengths of feeding periods. Furazolidone (nf-180) also comes in tablet form. nf-180 tablets are mighty helpful to treat the first few sick birds noticed to keep trouble in rein while nf-180 medicated feed is being put in for flock treatment.

Try furazolidone protective feeding. Feed it from start to finish. You'll experience the most disease-free season . . . finish the best birds you ever had. Give your flock the "furazolidone finish" and gain extra profits.

Drug levels

nf-180 levels always refer to pounds of nf-180 per ton of complete ration. If nf-180 is added to supplements and concentrates, then proportionately higher levels must be used to compensate for drug dilution by grain. Furazolidone is the active drug ingredient in nf-180 mix. A 2 lb. level of nf-180 per ton appears on tags as 100 grams or 0.011% furazolidone.

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Alfalfa Conference To Be Held Aug. 15

FORT COLLINS, COLO. — The Fifth Technical Alfalfa Conference, sponsored jointly by the Western Utilization Research & Development Branch, Agricultural Research Service, U.S. Department of Agriculture, and the American Dehydrators Assn., will be held Aug. 15 on the campus of Colorado State University, Fort Collins. USDA and experiment station researchers will discuss the latest results in the field of alfalfa research.

Dr. W. R. Kehr, USDA research agronomist stationed at the University of Nebraska, will talk about "New Varieties of Alfalfa," and E. M. Bickhoff of the USDA research laboratory at Albany, Cal., will discuss "Estrogens in Forages."

Subjects pertaining to the use of alfalfa in poultry rations will be covered by Dr. T. M. Ferguson, Texas A&M College, in his paper "Alfalfa for Pigmenting Poultry," and Dr. G. O. Kohler, acting chief, field crops laboratory, USDA, Albany, will discuss recent work on the "Utilization of Vitamin E in Alfalfa."

In the field of ruminant nutrition, Dr. John Matsushima, animal husbandry department, University of Nebraska, will report on recent research in feeding dehydrated alfalfa to beef cattle, and Dr. L. A. Esplin, animal husbandry, Colorado State University, will talk on "Feeding Pelleted Alfalfa to Lambs."

Dr. C. Ray Thompson of the Albany laboratory will present most recent data regarding the preservation of dehydrated alfalfa in non-oxidizing atmospheres, covering not only the protective features, but cost of installation and operating expenses in some of the large installations.

Other participants will discuss the use of pelleted forages, alfalfa in swine rations, and the stability of vitamin E in alfalfa meal.

Named to Monsanto West Coast Post

ST. LOUIS—Roy L. Brandenburger of St. Louis, Monsanto Chemical Co. vice president, has been appointed senior representative on the West Coast, it has been announced by Charles Allen Thomas, Monsanto president. He will be located at Santa Clara, Cal.

Mr. Brandenburger is the former general manager of the company's Consumer Products Division. In his new assignment he will render advice and assistance to the marketing and operating personnel in the various Monsanto divisions located in the western states.

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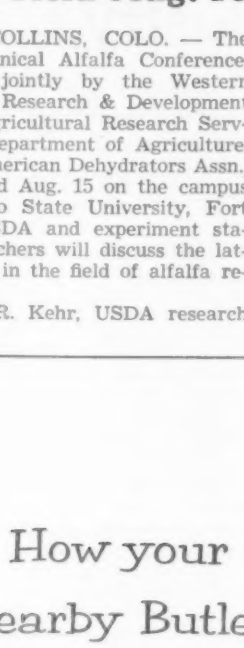

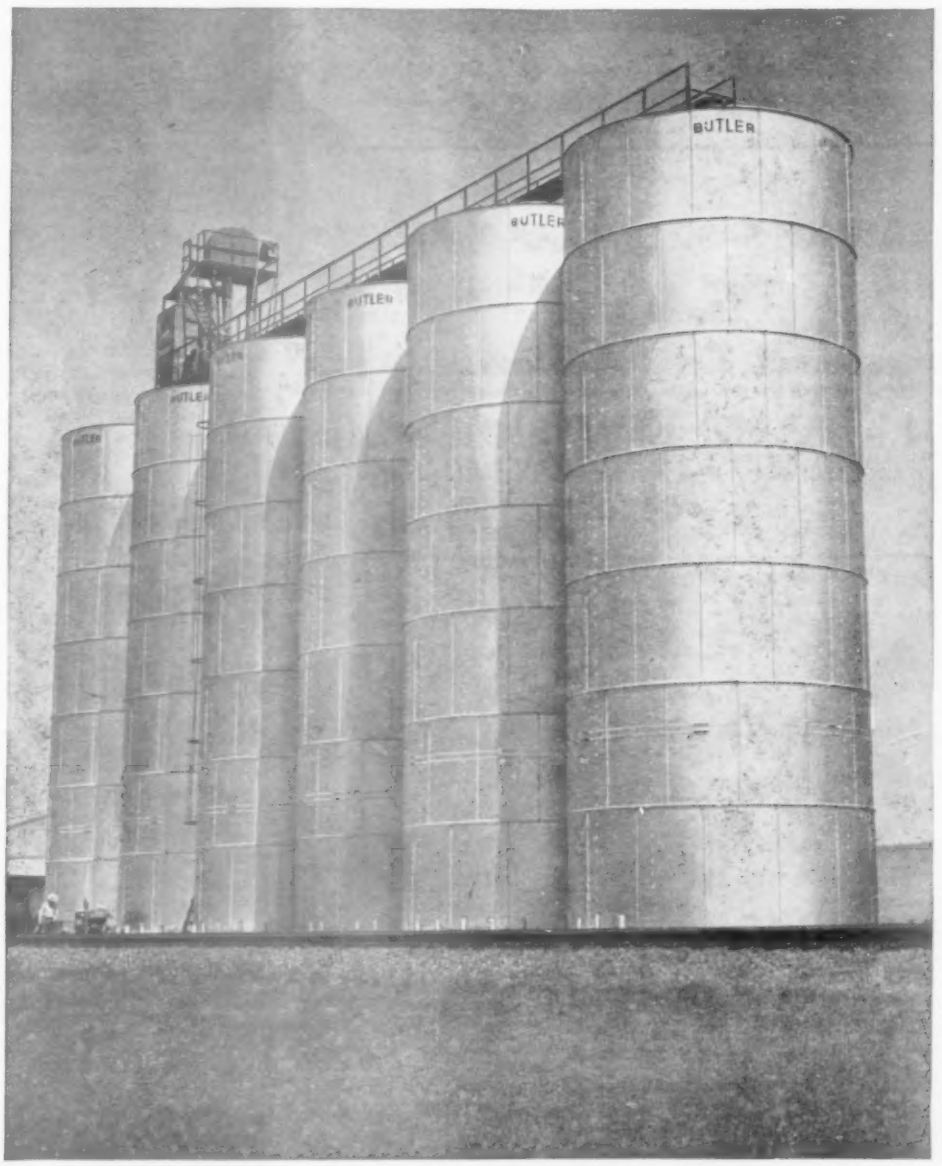

Woodland Mill Supply Company erected this Butler installation for Winema Elevators, Inc., at Henley, Oregon. The six bolted steel tanks provide safe storage for almost 90,000 bu. of barley.

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Future of the Midwestern Egg Industry

"Just where tomorrow's market for midwestern eggs will be is an open question. But the midwestern area will stand ready to supply its surplus of high-quality, low-cost eggs somewhere. The midwestern egg industry now is like a big, clumsy adolescent, who may eventually grow into an efficient, powerful, highly competitive adult."

By Dr. R. L. Kohls
Purdue University

EDITOR'S NOTE: An important area of the Midwest is still the major egg producing area of the country. As such, what it is and what it does are of importance not only to the Midwest but to the egg and feed industries of the entire U.S. In the accompanying article, Dr. R. L. Kohls, professor of agricultural economics at Purdue University, Lafayette, Ind., takes a look at the future of the midwestern egg industry. This article is from a talk by Dr. Kohls at the Massachusetts Poultry Day, University of Massachusetts.

v v

The thesis of this discussion is mainly one that the midwestern egg industry is synonymous to a big, strapping adolescent. He is big, powerful, clumsy, unskillful and has apparently never been able to "do anything right." But like many adolescents, he eventually may grow into a big, powerful, efficient, skillful, and effective adult. Basically the proposal is that the midwestern egg industry, up through about 1950, is best described by the adolescent. But since that time and into the years of the immediate future, there are many indications it is going to change to the more effective adult.

Magnitude, Midwestern Egg Production: The north central states have been, and are still, the major egg producing area of the country. More importantly than this to other areas, they are the main surplus area of the nation. They have produced nearly half of the nation's eggs. This situation was true in the latter part of the 30's; it is still true today (See Item 1). The nation's leading egg state, Iowa, produced 50% more eggs than the entire New England area.

More importantly from a marketing viewpoint, much of this huge production is surplus (See Item 2). When considered against potential average consumption, the surplus itself in 1956 was equal to one sixth of the total U.S. production. Though

ITEM 1. Contributions to U.S. Egg Production by Selected Areas, 1935-1956

Region	1935-39	1945-49	1955-56
	—% of U.S.—		
East N. Central	23	21	20
West N. Central	24	29	28
North Central	47	50	48
Northeast	4	4	5
Mid Atlantic	12	11	14
Pacific	8	7	10
Rest of U.S.	29	28	23
Total U.S.	100	100	100

The north central region has long been the producer of nearly half of the nation's eggs. Though there has been some fluctuation, its relative position is virtually the same as 20 years ago.

ITEM 2. Surplus Position of Midwest, 1935-1956 (Difference Between Production and Estimated Egg Consumption)

State and region	1935-39	1945-49	1956
	—(millions of eggs)—		
Ohio	74	—345	—844
Indiana	427	852	839
Illinois	—460	—378	—418
Michigan	—250	—743	—1107
Wisconsin	707	1,098	1,029
E. N. Central	498	484	—501
Minnesota	787	2,710	3,017
Iowa	1,604	3,422	4,019
Missouri	691	1,291	439
North Dakota	94	344	305
South Dakota	276	869	1,029
Nebraska	583	1,385	1,314
Kansas	848	1,359	897
W. N. Central	4,883	11,380	11,020
Total N. Central	5,381	11,864	10,519

The north central region is also the major surplus egg production area. In the late 1930's all of the area but Michigan and Illinois were surplus. However, the increasing industrialization and population has had its effect. Indiana and Wisconsin are now the only surplus states east of the Mississippi. Though the surplus of the total area is down some—it is still huge.

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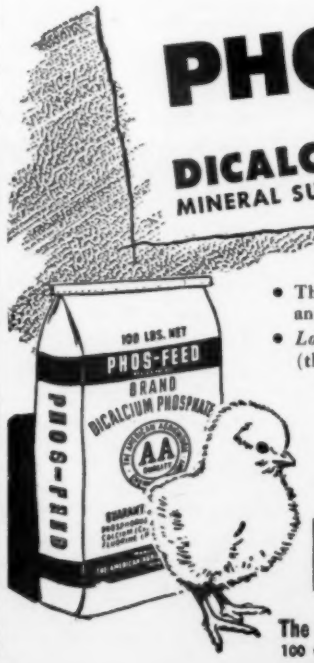

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ITEM 3. Where the Midwestern Surplus Is Sold (Percentage of Receipts of Shell Eggs of Selected Markets Coming From the North Central States)

City	1935-39 %	1945-49 %	1956-57 %
Boston	73	38	10
New York	53	64	52
Los Angeles	3	31	5
San Francisco	1	26	18
Atlanta	..	*88	*59

*1950 and 1957.

The past 20 years have seen drastic shifts in the markets supplied by the Midwest. Sharply down in Northeast; about steady in Mid-East; up, then down in far West and South. Shipments from the eastern central states have been reduced to all markets.

there have been some important recent changes in the surplus pattern within the region, the total available surplus from the midwestern states is not substantially different from what it was at the close of World War II. Much of the eastern part of the midwest is no longer an egg surplus area, but has become a deficit area. The production in the states of Ohio, Illinois, Michigan has not kept pace with the population growth and industrialization of those areas. In fact, when one considers all of the states east of the Mississippi, these states are now deficit instead of surplus as they were prior to World War II. The bulk of the surplus production is now centered in Wisconsin, Minnesota, Iowa, Nebraska and South Dakota.

Outlets Always A Problem: The big midwestern "egg boy" has done a lot of unsatisfactory thrashing around in the past 20 years trying to find the outlets which fit its large needs. When an area produces surplus production of this magnitude, it must sell this production elsewhere. Outlets have always been a problem of first magnitude to the midwestern states. During the past 20 years where the surplus eggs have gone has drastically changed. Originally this area was a heavy supplier of the New England and mid-Atlantic seaboard markets (See Item 3). Right after the war as the far West and the deep South demand grew faster than its local production, Midwest rapidly moved into the gap. In recent years the picture is now one wherein supply contribution to the New England area has declined to a place of little importance. The importance of midwestern eggs in both the West and the South markets has declined from the immediate postwar peaks. The only markets in which the midwestern position is now substantially the same as it was, apparently, are those of the eastern seaboard markets.

Midwest's Basic Egg Problem: In 1951 a description of the midwest's egg industry in a regional study was, "Lack of specialization was characteristic of the egg production; three fourths of the eggs sold come from farm flocks of 100 to 300 hens. Eggs were sold largely to the local produce station, and much of the area sold the majority of its eggs on an ungraded basis." Historically this was the stronghold of the small, sideline flocks, kept largely for the pin-money of the farmer's wife.

Study after study clearly pointed out that as specialization and flock size increased, up went the quality and the prices received and down went costs per dozen. Within the past 5-6 years there is substantial evidence that the meaning of these studies finally has begun to take hold.

Changes Under Way: During the 1940's the eastern producing areas began to move rapidly toward fewer farms producing eggs and greater production per unit. In this period the same development was under way in the central states, but at a much slower rate (Items 4 and 5). In the five years from 1950 to 1954, however, this specialization tendency had moved to the central states. During this period, the decline in producing units and increase in production per unit had changed as much as in the previous 10 years. Such changes are still moving at a very rapid rate throughout the area. There is every reason to anticipate that the next census will show that the rate of decline in farm numbers and increase in production per farm established during 1950-54 will have continued. Though the production per farm will no doubt still be substantially below that of the older specialized areas of the East and Northeast, the volume will be large enough to permit substantial production economies and a sharp up-grading of the product.

Another measure of these tech-

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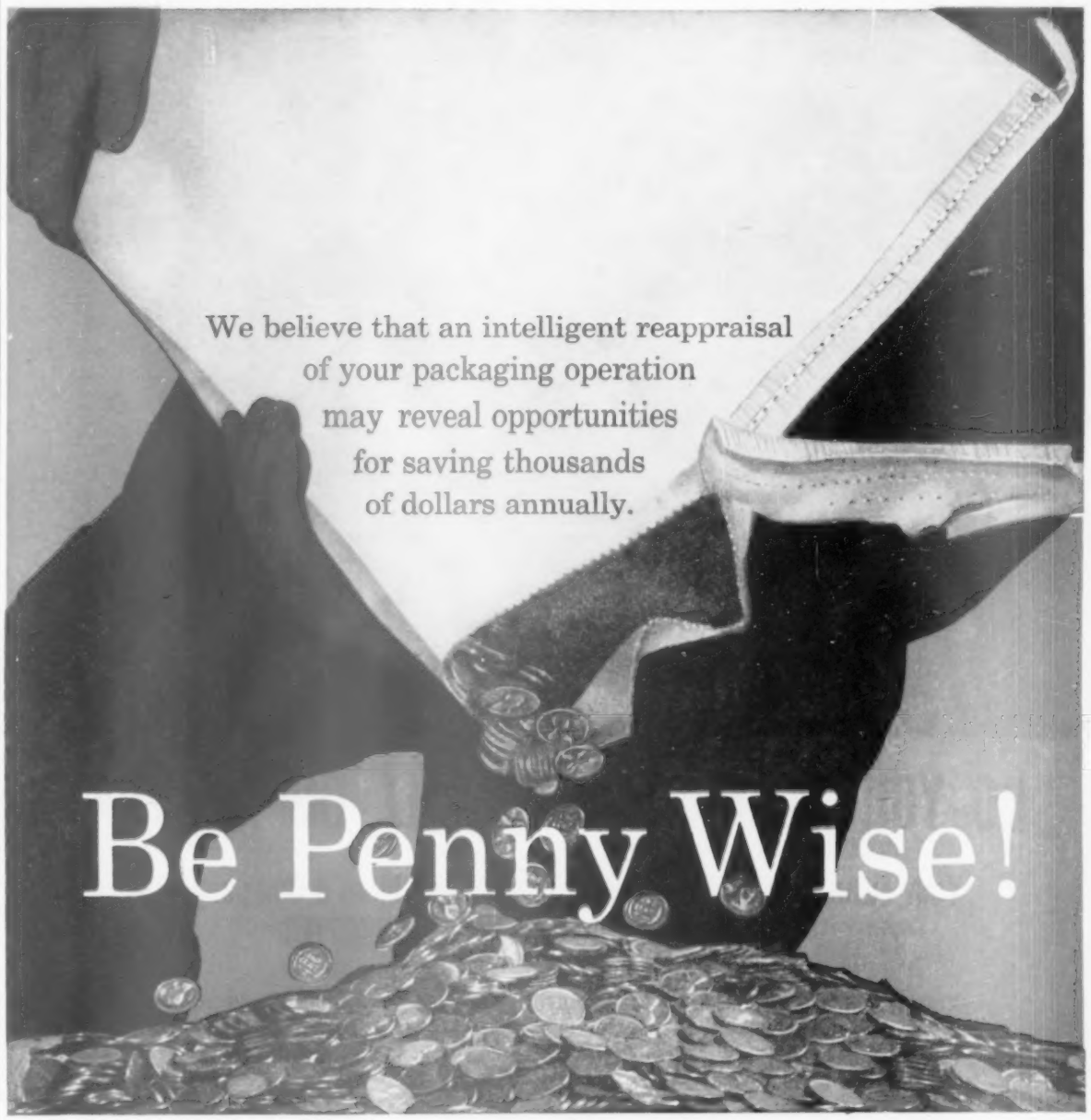

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ITEM 4. Farms Reporting Chickens, as Percentage of 1930 (1930=100 in All Areas)

Region	1940	1950	1954	Actual % of farms having chickens, 1954
East N. Central..	96	76	61	67
West N. Central..	94	78	68	77
Northeast	79	56	42	46
Mid Atlantic	85	64	50	61
Pacific	99	86	64	48
*U. S.	96	79	64	71

Central areas in 1950 were about 10 years behind northeastern areas in reduction of numbers of flocks. However, since then they have been moving more rapidly.

ITEM 5. Egg Production Per Farm Having Chickens, as Percentage of 1930 (1930=100 in All Areas)

Region	1940	1950	1954	Actual thousands of eggs per farm, 1954
East N. Central ...	107	188	260	24.5
West N. Central ..	99	191	225	24.6
Northeast	220	526	936	99.1
Mid Atlantic	138	293	504	63.5
Pacific	85	144	258	51.3
U. S.	105	190	236	17.2

Central area production per farm still small—but very rapid gains have been made since 1950.

ITEM 6. Egg Production Per Hen and Pullet on Farms, Jan. 1

Region	1935-39	1945-49	1956
East N. Central	104	136	178
West N. Central	92	131	172
Northeast	144	163	185
Mid Atlantic	122	140	174
Pacific	132	148	185
U. S.	100	127	169

After getting off to a slow start in the technical battle of egg production per hen, amazing progress has been made. By 1956, little difference existed between central areas and other regions.

ITEM 7. Distribution of Production by Laying Flock Size, Indiana, 1954

Flock size	Per cent of farms with chickens	Per cent of total chickens	Per cent of eggs sold
Under 400	92.7	*67.1	61.7
400-799	5.7	17.5	19.0
800-1,599	1.2	7.5	8.6
1,600-3,199	0.3	3.6	4.7
3,200 over	0.1	4.3	6.0
Total	100.0	100.0	100.0

*This figure was 93% in 1940; 85% in 1950.

Central area producers are rapidly moving to larger flocks. In 1954, one third of Indiana's chickens and nearly two fifths of her eggs came from flocks over 400 in size.

nological improvements is found in the changes in rate of lay. Immediately after the war there was a 30-eggs-per-hen difference in the rate-of-lay realized in the Northeast and in the Midwest (Item 6). By 1956 this had been narrowed to less than 15 eggs per hen difference. As the production efficiency pattern is now viewed, much of the inter-regional differences are now gone. This has been largely the result of the increased specialization bringing more interested management which quickly has given attention to better strains, feeding, and housing.

Perhaps the greatest and most meaningful change has been in the distribution of flock size. Though Indiana is probably not average, it does represent the tendency. In 1954, only 8% of Indiana flocks were above 400 in size (Item 7). This small group, however, accounted for one-third of the chickens and two-fifths of the egg production. In 1950, this size classification accounted for only 15% of the chickens.

The Future and Its Implications:

1. The small sideline flock—long a stumbling block—is rapidly giving way. Egg production in the midwest will continue to come from multi-enterprise farms. However, the laying flock enterprise will be large enough to permit acceptance of important technological practices. Just how large this flock will be is uncertain, but it does seem true that flocks far short of the multi-thousand, highly specialized type can produce good eggs at low costs.

Technologically the fences are down. No region will have an automatic advantage because of superior breeding, feeding, or management. It is estimated that midwest freight rates to the East are about 2-4 cents per dozen. The developing commercial flock enterprises of the midwest can take this added charge and still supply Eastern markets with high quality eggs at a comparative profit.

2. The egg quality will be up sharply with the above development. As the next decade progresses, quality will not be the main problem of the midwestern area. Instead the problem will be one of finding ample outlets for a quality product.

3. Marketing arrangements will receive increasing attention. Midwestern producers are demonstrating considerable open-mindedness about new channels and new arrangements. Seeing the integrated broiler industry slip from their grasp had its impact. The knowledge that no area automatically is the favored area has opened a lot of eyes.

Less and less of the surplus eggs will move "unattached" into major consumer centers to compete directly with local supplies. Advance sales contracts, integrated producer-seller operations, direct retail acquisitions—all will be experimented with.

Just where tomorrow's market for midwestern eggs will be is an open question. But the midwestern area is going to stand ready to supply its surplus of high quality, low cost eggs somewhere. The big, clumsy boy is going to mature into an effective, powerful, highly competitive man determined to have its place in tomorrow's egg world.

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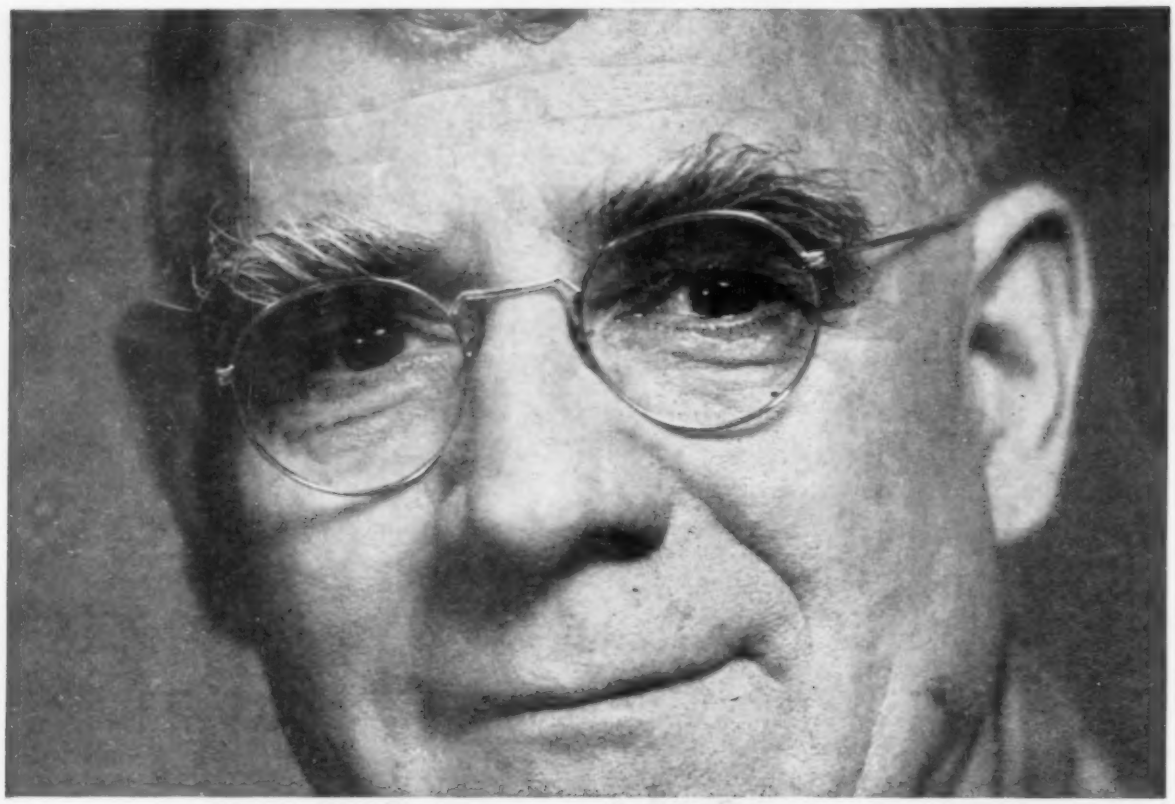
SAUK CENTRE, MINN.—Gib Weisser, owner of Gib's Farm Service here, announced that he and his brother, Al Weisser, Sauk Rapids, Minn., have purchased the West Union (Minn.) Elevator. Lloyd Hovland will be retained as manager and the name will remain the same.



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BALTIMORE, MARYLAND

Temperature-Gain Relationship Shown In Iowa Hog Test

SANTA BARBARA, CAL. — One degree lower average summer hog-house air temperature resulted in an average of 0.8 oz. more gain per day per head on 100- to 210-lb. growing-finishing swine in a three-year test at Iowa State College. It also resulted in 0.8 oz. less feed required per pound of gain.

Dr. T. E. Hazen, agricultural engineer at Iowa State College, reported this finding here at the recent annual meeting of the American Society of Agricultural Engineers.

Farmers have known that long periods of hot weather reduce hog gains. These three years of experiments with aluminum, steel and wooden housing measure the amount of the loss. Dr. Hazen said this offers an insight into what might be gained economically by wisely engineered designs of controlled production units for swine.

The difference in rate of gain and feed efficiency between the high and low groups in this test is comparable to the results obtained in major advances in swine nutrition. If every hog producer in Iowa could reduce the average mid-summer air temperature for his growing-finishing hogs by 1° during the period when the average temperatures run from 80 to 85°, the annual saving in feed could amount to $4 million, he said.

Temperature Can Vary

The experiments showed that swine gain weight about as fast and efficiently under naturally varying temperatures as under temperatures held constantly at the natural average level. This means, Dr. Hazen said, that farmers can achieve the gains of cooler housing simply by providing housing that keeps the average temperature lower. They needn't go to the expense of maintaining constant low temperature. One extremely hot day does not seem to set the hogs back if it's followed by a cool night or a cool day. It's the average temperature that makes the difference. (Practically all feeding in these experiments was done at night).

The Iowa researchers used thermocouples to record air temperatures

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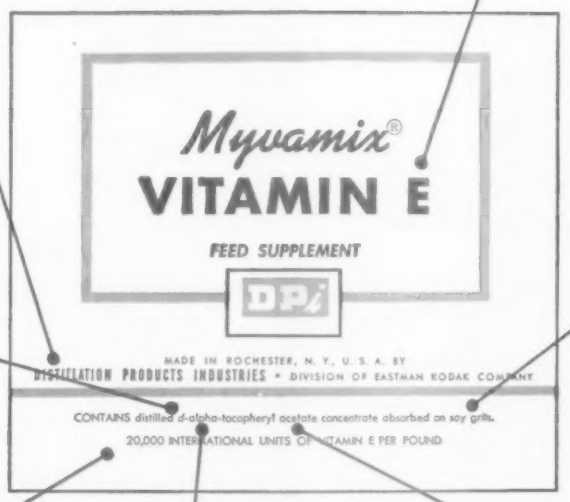
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continuously throughout the tests. They also tested water temperature, surface temperature of the inside of the hog houses, relative humidity and intensity of radiant heat at the same time. However, they found the average air temperature at hog level was the most satisfactory of these measurements associated with gains and feed efficiency.

The critical point where heat begins to bother hogs appears to be about 80° F. daily average, Dr. Hazen said. This average includes night and day temperatures. During the summer of 1957, 108 hogs were carried in the experiment from about 82 lb. live weight to 150 lb. In aluminum housing the average air temperature at hog level for eight midsummer weeks was 82.5°. In steel and wood it was 2.3° higher. Pigs housed at the lower average temperature gained nearly 1.5 oz. more per head per day.

In 1956, the lowest average temperature was 80.4° in the wood houses. Temperature averaged 1.8° higher in the steel houses. In this season, 72 pigs were carried from about 109 lb. to about 210 lb. These larger pigs in the houses where air was 1.8° cooler averaged nearly 2.5 oz. more daily gain per head than their neighbors in the warmer air of the steel houses.

In 1955, the researchers fed 72 pigs from about 114 lb. to about 207 lb. This time, the aluminum houses averaged 80.8° air temperature at hog level during the midsummer weeks. Air in the steel houses averaged 2.7° higher. The pigs in the cooler air averaged more than 2 oz. more average daily gain per head than their neighbors in houses where the air was warmest.

A similar study with smaller pigs —starting at about 51 lb.—in the winter of 1955-56 showed some advantage for the wood buildings, which stayed warmer in winter. However, as long as the pigs were protected from wind and wet, they were affected less severely by cold weather between average air temperatures of 35 and 40° than the heavier animals were by the hot weather.

Dr. Hazen said the results indicate that further tests to determine animal response to environment can be based on average daily air temperature, regardless of the material of which the building is made. By establishing the effect of a particular environment on growth, Dr. Hazen said, the builder can be confident that any building which provides this environment should result in equal animal response.

The engineers worked with the swine nutrition staff at Iowa State College in these experiments. Further work, Dr. Hazen said, is planned in exploring temperature effects more completely and in nutrition studies aimed at counteracting the effect of improper environment by improving nutrition.

Doctor—"That pain in your leg is caused by old age."

Grandpa—"Nonsense. The other leg is the same age and doesn't hurt a bit."

◆ ◆ ◆

They were burying a rather unsavory character who had never been near a place of worship in his life. The services were being conducted by a minister who had never heard of him.

Carried away by the occasion, he poured on praise for the departed man. After ten minutes of describing the late lamented as a father, husband and boss, the widow, whose expression had grown more and more puzzled, nudged her son and whispered:

"Go up there and make sure it's Papa."

◆ ◆ ◆

Husband: "What is it, dear?"

Wife: "I found another lipstick in the car. Have you been out again with that fellow who sells cosmetics?"

◆ ◆ ◆

Little girl concluded her nightly prayer with, "—and God bless everybody. And by the way, God, this is goodbye. Tomorrow we're moving to Texas."

◆ ◆ ◆

"I want a man to do odd jobs around the house, run errands, and mow the lawn. I want a man who will never answer back and always do what he is told. Now, if you can do all this, the job is yours."

"Ma'am," said he, "you ain't lookin' for a handy-man, you're lookin' for a husband!"

◆ ◆ ◆

Father was sitting in the armchair watching TV one evening when Junior came in and showed him a new watch, explaining that he had found it in the street.

"But, son," objected the father, "are you sure it was lost?"

"You bet it was lost," answered Junior. "I even saw the man looking for it!"

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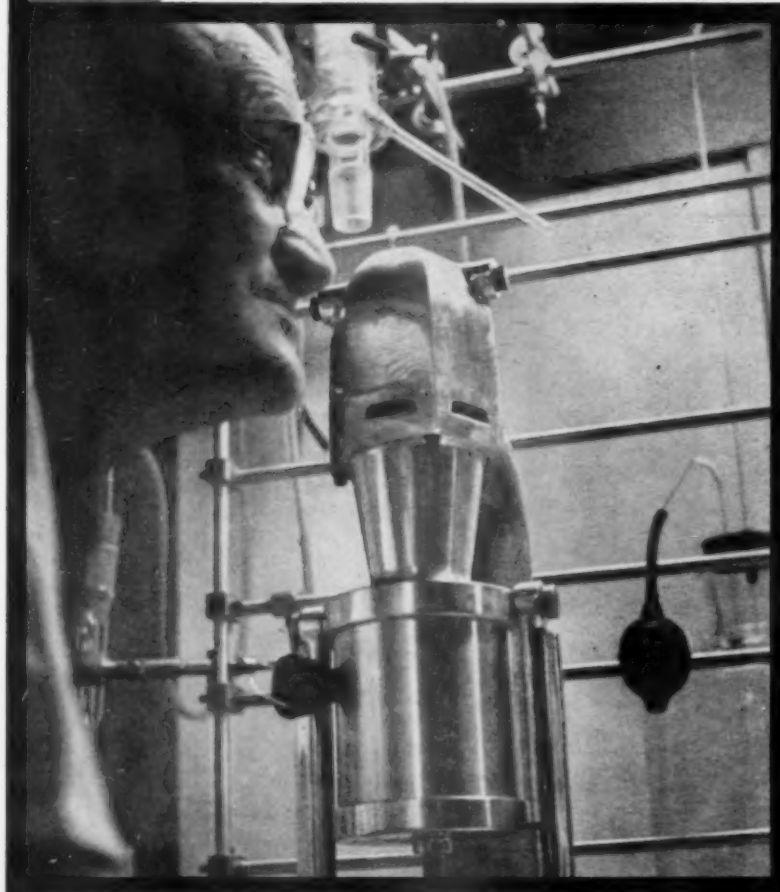

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AFMA to Sponsor Awards Program For Farm Editors

CHICAGO—A farm magazine editor and a radio-television farm director will be chosen on a nation-wide basis to each receive an "animal agriculture award" from the American Feed Manufacturers Assn.

Each of the winners will be presented with a plaque at the 51st annual convention of the AFMA May 11-13, 1959, in Chicago. Recognition of the winners will also be given at the annual meetings of the editors' and farm directors' national associations.

Both programs will judge entrants on their promotion of a sound, prosperous and thriving animal agriculture resulting from better management, breeding and nutrition practices, as well as the marketing and ultimate consumption of livestock products, according to an AFMA announcement.

In making the selections, magazine, radio and television stories and programs, promotions, contests and other activities will be considered for their value in encouraging most economical production of livestock and poultry of highest quality, fitting best into market demands, the announcement explained.

Rules for the programs have been approved by the officers of the American Agricultural Editors Assn. and the National Association of Television and Radio Farm Directors. Both programs have been endorsed by the AFMA board of directors.

The contest period will cover Jan. 1, 1958-Jan. 1, 1959. Programs staged and material published during this period will be eligible. Entries will be accepted up to Feb. 1, 1959, and judged by a group of national agricultural leaders.

Members' Help Needed

The AFMA announcement mentioned that members could help support the program by encouraging the farm editors and radio-TV directors who advertise members' product to enter the competition. Each of the editors and farm directors in all 48 states has received notification and rules for the awards program.

Judges for the program will be presidents or full-time chief executive officers of the National Livestock and Meat Board, American Dairy Assn., Poultry & Egg National Board, American Veterinary Medical Assn., and Supermarket Institute. Representatives of the American Association of Agricultural College Editors will be included among the judges of the farm editor program, but not the radio-TV director selection.

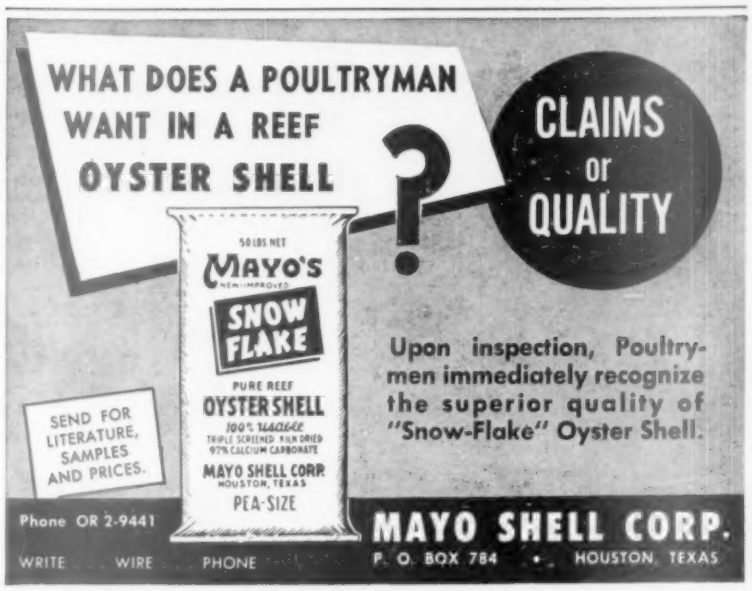
This summer the AFMA will again sponsor breakfasts and luncheons at the annual meetings of the American Agricultural Editors Assn., National Association of Television and Radio Farm Directors and the American Association of Agricultural College Editors. Purpose of the functions is to provide an opportunity for AFMA representatives to meet editors in a friendly, informal atmosphere, and for editors to identify AFMA personnel.

North Carolina Reports Growing Feed Tonnage

RALEIGH, N.C.—North Carolina feed tonnage during the first 10 months of the current fiscal year was almost 13% ahead of the same 10 months a year earlier, the North Carolina Department of Agriculture reports.

A recent report shows that 1,117,076 tons were shipped during the months of July, 1957, through April, 1958, compared with 991,656 for the same 10 months in the 1956-57 fiscal year.

Increases over the same month of the previous year were reported for every month of the period. The largest increases have occurred since December. Total tonnage for the months of December through April was about 19% more than for the same period the previous year.



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Always the Leader in Mobile Milling, the DAFFIN is now BETTER THAN EVER!

NEW worksaving features.

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A standard "plus" feature on all New Daffins, the sensational Pneumatic Unloader air-lifts finished feed to storage, eliminates much physical labor. In kits for older Daffins.

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Permits you to r-e-a-c-h- o-u-t for more batches per day with less effort. Extends 20-foot arm into corn cribs or bins, swiftly carries grain and ear corn to the Daffin for proper loading. Can be installed on new Daffins as accessory equipment. In kit form for older units. Write us!

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Shells earcorn with or without husks. Can be fed from Extension Loader as illus. or from own elevator. Cleaner available on husker-sheller. Accessory fits all Daffin units.

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January 25, 1958

Mr. Leo Potishman, President
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As you know, we have been using VIT-A-WAY for about six years and our sales have steadily increased each year, and for the past two years they have doubled, we think as a result of the services offered by your Vit-A-Way organization.

We attribute a good portion of our growth, product acceptance, and success to the splendid help of your Vit-A-Way products and the help and advice of your organization.

We unhesitatingly recommend your products and services to anyone interested in better nutrition for all livestock.

Sincerely yours,
MIXON MILLING COMPANY
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Sales Doubled
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So did I . . .
Says **Mr. T. J. Elkins,** *owner*
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"From the day I opened my business thirteen years ago, I have followed your formulation, and put VIT-A-WAY Livestock Fortifier in my feeds, according to your instructions.

I consider this continuous use of VIT-A-WAY in my feeds has helped to make it necessary that my plant be enlarged several times, and I am now doubling my capacity.

AND . . .

SO CAN YOU MR. FEED MANUFACTURER
WHEN YOU FORTIFY YOUR FEEDS WITH VIT-A-WAY

A **COMPLETE PROGRAM** *to help you sell more feeds!*

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Our complete feed formulating department is at your service to help you prepare any type formula for any type livestock feed. Your formulas will be made using local and easily available ingredients . . . and, they will be uniform and result-producing at the lowest possible cost to the feeder. You will get "your own" formulas prepared by some of the nation's finest nutritionists, who are on the Vit-A-Way staff.

2. NUTRITIONAL COUNSEL . . .
Our department of research and control is always ready to answer questions and furnish data on "tomorrow's problems today" . . . to help you meet and solve the problems in your own area. This puts you in a better position to serve your customers with the newest developments in scientific and efficient feeding practices.

3. ADVERTISING and MERCHANDISING HELP . . .
Our complete advertising department will assist you in advertising and merchandising programs . . . designed to promote the sale of your feeds. Ad mats . . . folders . . . point of purchase material . . . radio copy . . . inserts and stuffers . . . hand bills . . . and everything you need to build sales and customer demand for your feeds!

4. DIRECT MAIL PROGRAM . . .
Free mailings that go right into the home of your customers and prospects . . . with your name imprinted on them. These mailings invite them to visit you . . . and further explain to them how your Vit-A-Way fortified feeds will help them get top feeding results and lower feeding costs.

5. SALES TRAINING . . .
Help for you and your salesmen to be sure they are familiar with your products, and how to apply their use to the problems of the feeder. Selling tools, literature, and mailings go to your salesmen to keep them abreast of new developments and findings so they can do a better selling job for you.

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VIT-A-WAY makes a GOOD FEED BETTER!

Gilts Produce Leaner Carcass, Tests Show

WOOSTER, OHIO—An extensive study of 385 littermate barrow and gilt pairs at the Ohio Swine Evaluation Station here has shown a factor significant to the progress of meat-type hog campaigns—gilts produce leaner carcasses than barrows, on the same feed.

According to W. H. Bruner of the Ohio Agricultural experiment station and Ohio State University, which with the extension service jointly supervise the evaluation station, the gilts had less backfat, bigger loin eyes and heavier loins and hams. The barrows yielded 2.3% less lean cuts than gilt carcasses.

But the barrows gain faster than the gilts, he added. In a majority of cases in this test, the barrows reached 210 lb. live weight at 160 days. It took gilts seven days more. However, barrows produced carcasses about ½ in. shorter than gilts.

All the 770 head in the study were fed coarsely-ground shelled yellow corn, finely ground oats, meat scraps, soybean oil meal, dehydrated alfalfa meal, B vitamins, antibiotic and yeast premix and mineral mixture.

Mr. Bruner points out that because of these distinct differences in performance of littermate barrows and gilts, it is advisable that producers include both in a selection program for the evaluation of prospective breeding stock.

Honeymead Installs Soybean Drying Unit

SAN FRANCISCO — The recent completion of what is believed to be the world's largest individual soybean drying unit has been announced by Shanzer Manufacturing Co., San Francisco.

Custom-built for Honeymead Products Co., Mankato, Minn., the drier is reported capable of handling the firm's 10,000 bu.-per-hour receiving capacity, as well as future planned increases in volume.

According to a Shanzer spokesman, the vertical column type unit dries and cools soybeans in one operation. In addition, the adjustable cooling and drying section is said to compensate for wide variations in outside temperatures—which vary from 100° summers to —30° winters — at Honeymead's Minnesota location.

Overall column structure height is 84 ft. Total fan delivery is said to be over 424,000 c.f.m. for the combined output of the twin units. Burners will deliver a maximum heat release of 44 million BTU's per hour.

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FEEDSTUFFS

Elmer Barr, Jr. Fred A. Stoner

Douglas Names Grain Sanitation Specialists

KANSAS CITY—Donald D. Farmer, director of sales and advertising for the Douglas Chemical Co., announces the appointment of two new grain sanitation specialists. Elmer Barr, Jr., will be the Douglas grain sanitation specialist and district manager for Ohio, eastern Michigan and eastern Kentucky. Fred A. Stoner will be the grain sanitation specialist and district manager for Indiana, western Michigan and central Kentucky.

Mr. Barr is a native of Ohio and has had extensive agricultural background as manager of the Ashville Grain Co., Ashville, Ohio for five years, as well as an association with the Scioto Grain and Supply Co., also in Ashville. Mr. Fred Stoner was formerly associated with the Alliance Manufacturing Co. and the Bob Ball Co. as an agricultural sales representative.

Washington Firm Buys California Hatchery

KIRKLAND, WASH.—Heisdorf & Nelson Farms, Inc., Kirkland, has purchased the hatching and farm facilities of Sales & Bourke, Inc., in Petaluma and Riverside, Cal., according to a joint announcement from the two firms.

The purchase includes the 384,000-egg capacity hatchery maintained by Sales & Bourke in Petaluma along with the firm's 488,000-egg capacity hatchery in Riverside. Heisdorf & Nelson's Riverside hatchery will be consolidated within the Sales & Bourke Hatchery in Riverside. These additions bring the Heisdorf & Nelson incubator capacity in California to 1,352,000 eggs.

Broiler Council Has New Man on Staff

RICHMOND, VA.—John Sherrill, a native of Granite Falls, N.C., has joined the staff of the National Broiler Council, Frank Frazier, executive vice president of the council, announced.

A previous employee of the Southeastern Poultry & Egg Assn. and the Virginia State Poultry Federation, Mr. Sherrill served as managing editor of the two association's official publications for three years. For the past 14 months he has been associated with Blanton Smith Hatcheries, Nashville, Tenn., in sales promotion.

Mr. Sherrill graduated from the University of North Carolina in journalism.

Dates Set for Annual Elevator Short Course

ST. PAUL, MINN. — The annual Grain Elevator Operators Short Course held at the University of Minnesota has been set for Jan. 19-Feb. 6, 1959, according to an announcement from the short course committee.

At a recent meeting held for planning the 1959 course, the committee agreed that the fee should remain at $65 for the period, and that the fee should include some materials such as textbooks, notebooks, etc.

FIRE DAMAGES ELEVATOR

BROKEN ARROW, OKLA. — Losses estimated at between $12,000 and $18,000 were sustained to the Broken Arrow Elevator in a recent fire which destroyed the top 20 to 25 ft. of the structure. It is owned by the Chickasha (Okla.) Cotton Oil Co.

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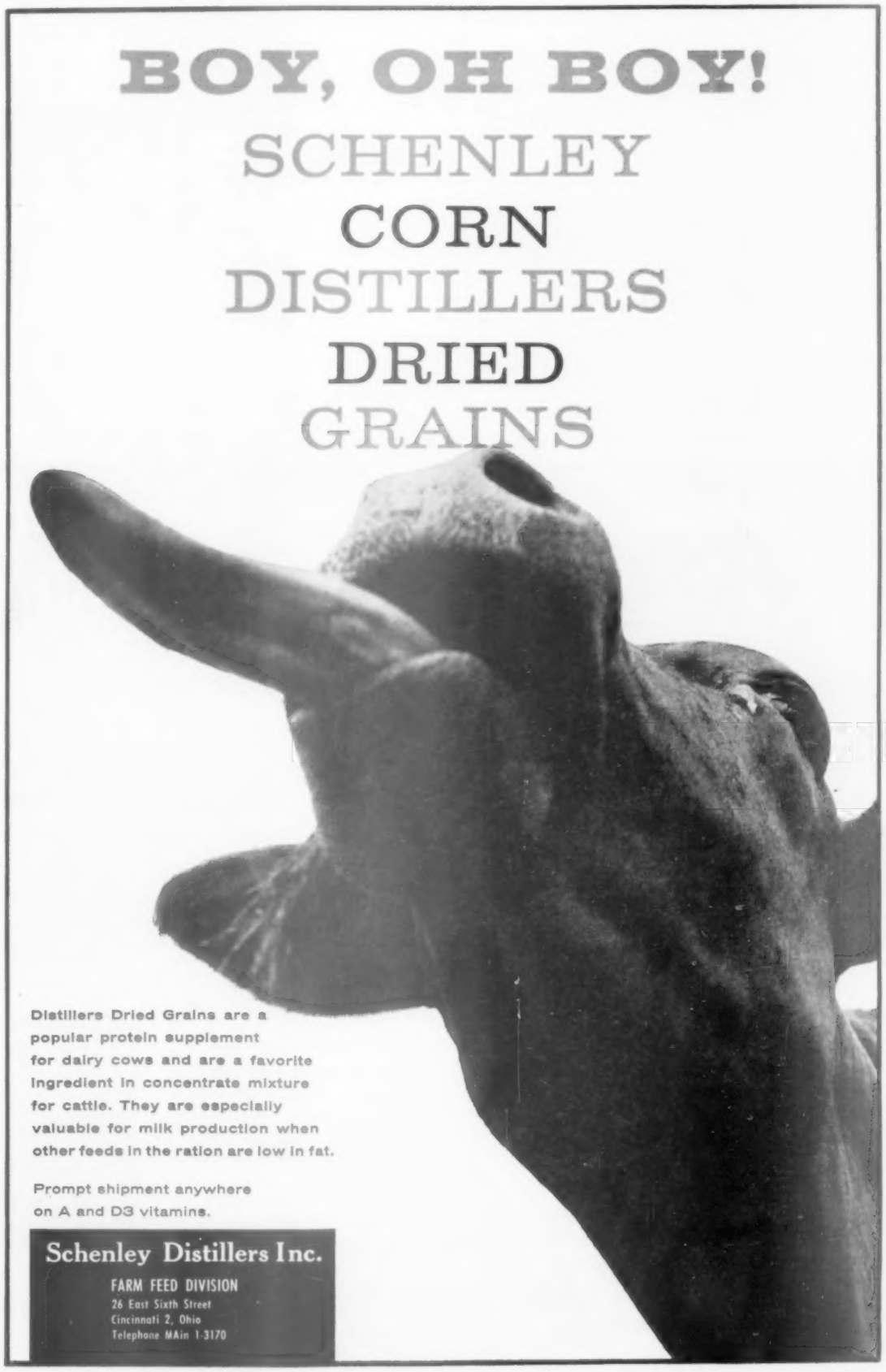
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WHAT'S NEW IN FEEDING?

Putting Research to Work

By Spencer H. Morrison, Ph.D., D.V.M.

Nutritional Factors in Calf Diarrhea

● F. G. Owen, N. L. Jacobson, R. S. Allen and P. G. Homeyer, Iowa State College; Journal of Dairy Science, Vol. 41, No. 5, May, 1958.

ABSTRACT

Experiments were conducted to determine the effect of various components on the consistency of the feces of calves fed modified milk (whole or skimmilk) diets.

Various combinations of minerals, lactose, butter oil, lactalbumin and potassium hydroxide were explored in a preliminary experiment with 17 calves. Duration of trials was generally from two to four days, but in certain cases extended to periods of over two weeks. The general results of the preliminary experiment suggested that minerals (mixtures resembling either milk ash or whey products) added to whole milk at levels from one to nine times those present in normal milk had no serious effect on fecal consistency. Except for a few occasions, consumption of the high mineral diets was normal. Lactose added at 5% level or lactalbumin at 2.4% level had no influence on diarrhea with whole milk diets.

When lactose was added to reconstituted skimmilk diets, moderately loose feces were shown, and when the diet was further supplemented with minerals, extreme looseness occurred. Inclusion of butter oil, with or without lecithin, in the preceding diets reduced the diarrheic condition.

Feeding of a reconstituted whey-product produced diarrhea even when the pH was raised to approximately neutral before feeding by the addition of potassium hydroxide. Here again, the addition of butter oil, with or without lecithin, tended to reduce the scouring condition.

None of the semi-synthetic diets containing lactalbumin or casein were consistently scour producing, and no noticeable differences were observed in fecal consistency by feeding milk or different curd tensions.

Experiment 2 evaluated the effects of 2.1% minerals (simulated whey ash only), 5% lactose, and 0.4% sodium citrate dihydrate, when added to basal diets of whole milk or skimmilk fed at 8% of body weight. All combinations of diets and additions were tested during four-day experimental periods, with minimal adjustment periods of three days of whole milk feeding between test feedings using eight Holstein calves.

The results of the second experiment showed that the most diarrheic diets contained both lactose and minerals. Whole milk diets were less diarrheic than skimmilk. The absence of curd formation in the abomasum, as produced by the action of sodium citrate, did not appear to influence consistency of feces. Weight changes during the quasi Latin Square experiment were small, but all calves appeared vigorous and healthy at all times.

COMMENT

This paper is especially interesting to feed manufacturers making whole-milk replacers for dairy calves. It is suggested by the authors that the beneficial effects of milk-fat in the diets high in minerals may be due to fat increasing mineral utilization, or reducing osmotic pressure, or complexing of bile acids with fatty acids, or by providing a protective coating to the intestinal mucosa. Whey product was more scour inducing than either skimmilk or whole milk diets, while whole milk diets were superior to skimmilk ones.

It should be carefully noted, however, that the addition of minerals to diets in the preliminary experiments had no effect on scouring. The mineral mixtures used in the preliminary experiment either resembled those present in milk ash or in the

EASTERN SHORE GRAIN & FEED DEALERS DINE—The head table group at the recent annual golf, dinner dance and membership meeting of the Eastern Shore Grain & Feed Dealers Assn., at Seaford, Del., included from left to right, P. M. Brooks, Jr., P. M. Brooks, Inc., Chestertown, Md., association vice president; Mrs. Brooks; Sheldon Chandler, Jr., Berlin (Md.) Milling Co., secretary-treasurer; Mrs. Chandler; Alvin E. Oliver, executive vice president of the Grain & Feed Dealers National Assn., Washington, D.C.; J. E. Davis, General Mills, Inc., Seaford, Eastern Shore association president; Mrs. Davis; Mrs. Crain and Glen Crain, Adams & Crain, Georgetown, Del., vice president.

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- *Huge air delivery*
- *Automatic recirculation of grain eliminates wet pockets*
- *LP gas or oil-fired, complete safety controls.*

Its fast but gentle action makes the new Lennox "Super 600" more practical for elevator or custom drying. Load the 9 ft. drag auger from any width truck end gate. A bucket elevator smoothly hauls your grain up to eight 75 bushel bins. Complete recirculation of grain takes place without hand labor. Result —600 bushels of top quality grain quickly and uniformly dried for an amazingly low operating cost. Choose any desired heat output from 500,000 to 4,000,000 Btu's. Perforated side walls offer maximum 33% free area for air delivery.

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- *Extra-strong 16 gauge, skin stressed wall construction both inside and out*
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- *Available with PTO or electric drive 3-phase current*
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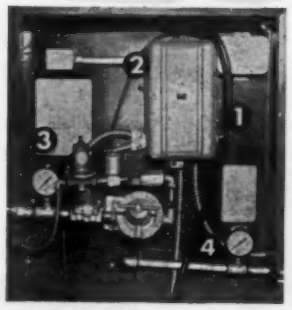

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(Gas-fired)

All controls are easily reached by lifting the weatherproof control box cover.

1. *Fan switch*
2. *Burner start switch*
3. *Gauge showing liquid supply line pressure*
4. *Gauge showing gas pressure to burner*

For full information on the "Super 600", write—

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Dept. F-7, 1701 East Euclid Avenue • Des Moines, Iowa

From the folks who know crop drying best

whey product, yet no scouring effect was noted. It is apparent that although the first experiment was only a screening trial, different experimental conditions may influence the response obtained.

Most commercial milk replacers being manufactured today are based upon either skimmilk or whey products; therefore, some attention should be paid to additions of minerals and lactose to such milk replacers to hold the possibility of nutritional scours to a minimum.

●

Timely and Worth Noting

ENZYME SUPPLEMENTATION

For those of you who have been interested in following the work at the Washington and Oregon stations on the improvement of feed value of barley by enzyme supplementation or water treatment, the following papers reported in Poultry Science, Vol. 37, No. 2, March 1958 are worth reading in detail.

(1) "Effects of Pearling Barley and of Different Supplements to Diets Containing Barley on Chick Growth and Feed Efficiency"—R. E. Fry, J. B. Allred, L. S. Jensen and J. McGinnis, State College of Washington.

(2) "Influence of Enzyme Supplementation and Water Treatment on the Nutritional Value of Different Grains for Poults"—R. E. Fry, J. B. Allred, L. S. Jensen and J. McGinnis, State College of Washington.

There is a great deal of interest in the subject matter of these two articles. As yet, the evidence is somewhat conflicting as to the final value of either enzyme supplementation or water treatment of barley or other grains. While responses have been secured with western type barley, fragmentary reports indicate no value with barley grown in other regions of the country.

CONTROL OF FLIES

Recent work by Quisenberry, Ryon and Price of Texas A&M (Veterinary Medicine, Vol. 53, No. 6, June, 1958) suggests that Polybor-3 (Pacific Borax) added to the feed at the rate of 3 to 6 lb. per ton may be effective in control of flies in cage layer operations. Much more testing needs to be done before the compound is released for commercial use, including (1) the effect of droppings from treated birds when used as fertilizer on growing plants, (2) tolerance of the birds to Polybor-3, and (3) residual levels of the chemical in eggs and poultry meat.

NEW CALIFORNIA MARKET

STOCKTON, CAL. — The Valley Livestock Marketing Assn. here will construct a $200,000 livestock sales facility in the Red Bluff area. Present plans call for the new market to be in operation by January, 1959. Facilities will include approximately 150 pens to accommodate 2,000 cattle with additional pens for hogs and sheep.

Arkansas Reports Feed Sales Increase

LITTLE ROCK, ARK.—A 7% increase in feed tonnage was reported by the Arkansas state plant board for the first three quarters of the 1957-58 fiscal year over the same period of the preceding fiscal year.

Total sales reported for 1957-58 were 833,904 tons. The previous year's total for the same period was 776,331.

A total of 285,794 tons was reported for the third quarter (Jan. 1, 1958 through March 31, 1958), compared with 257,561 for the same period the previous year.

Broiler starter and grower feeds were the leading feeds for the quarter. They totaled 119,272 tons. Other poultry feeds totaled 37,501 tons, and dairy or cow feeds were third in order of tonnage sold with 35,873 tons.

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Ground Limestone	41.23%	Ferrous sulfate	0.50%
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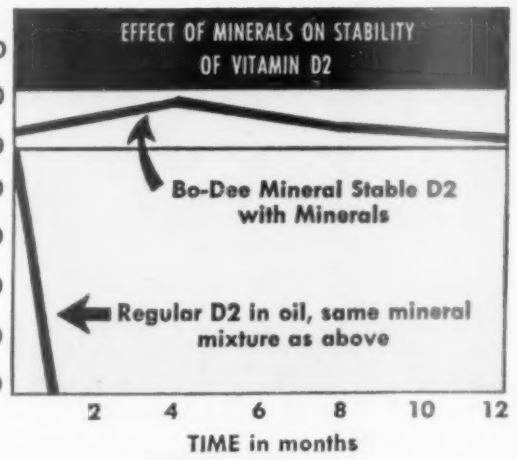
Tricalcium phosphate	13.00	Manganese sulfate	0.10
Magnesium sulfate	10.00	Cobalt sulfate	0.02
Iodized sodium chloride			20.00%



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Purdue Reports Hygromycin and Antibiotic Study

LAFAYETTE, IND.—Purdue University researchers reported recently on a study of the effects of hygromycin and a combination of antibiotics on growing-finishing swine. The report was made by Dr. J. H. Conrad and Dr. W. M. Beeson in Mimeo A. H. 233 from the animal husbandry department.

The scientists first cited the results of a previous study comparing Aureomycin, arsanilic acid and hygromycin. In this study, Aureomycin increased gains 6.8%, arsanilic acid increased gains 8.1%, and hygromycin increased gains 8.8%. After the experiment was terminated, an average of 14.5 roundworms per pig was expelled by the control pigs, an average of 18.2 by the arsanilic acid-fed pigs and none by the pigs fed the antibiotic hygromycin. Consequently, said the researchers, it was impossible to determine from this study if hygromycin stimulated gains because of its control on roundworms or because of its true antibiotic effect or possibly a combination of the two preceding effects.

In view of these preliminary findings and results obtained by others, an experiment was conducted to determine (1) the effects of hygromycin when fed to wormed and unwormed pigs, (2) the effects of hygromycin when fed in addition to a combination of growth-stimulating antibiotics to both wormed and unwormed pigs.

Experimental Plan

Eight lots of 10 Duroc pigs each were used. They were seven to eight weeks of age and averaged 32 lb. initially. For the unwormed pigs, experimental treatments were: (1) control; (2) hygromycin B, 12 grams per ton (12 million units); (3) 20 grams of an antibiotic combination per ton (7.5 gm. zinc bacitracin, 2.5 gm. penicillin, 5 gm. Aureomycin, 5 gm. Terramycin); (4) both hygromycin and the antibiotic combination. All of these pigs were given access to both a concrete platform and a contaminated soil lot, assuring a relatively heavy roundworm infestation.

The same treatments were used with four lots of pigs which were wormed twice with piperazine, once initially and once after 49 days on test. Also, all of these pigs were confined to concrete platforms. They had a very low roundworm infestation.

The pigs in the test were fed ground yellow corn mixed with a Purdue supplement to make a 16% protein ration from weaning to 100 lb. and 14% from 100 to 200 lb.

Individual fecal samples from all pigs were taken at 0, 49 and 91 days and ova counts were determined. After the experiment was completed, all pigs were slaughtered and the number of roundworms, whipworms and nodular worms found in the intestinal tract were determined.

Results Summarized

The Purdue researchers summarized results of the test as follows:

"1. Hygromycin effectively controlled roundworms, nodular worms and whip worms, as shown by ova counts taken at 49 and 91 days and by the worm counts obtained at slaughter, but failed to improve gain or feed efficiency. All 40 pigs fed hygromycin were free of roundworms at slaughter. In contrast, unwormed control pigs averaged 23.7 roundworms and unwormed antibiotic-fed pigs averaged 13.9 roundworms at slaughter. In comparison, for the pigs wormed twice and confined to concrete, the controls averaged 6.1 roundworms and the antibiotic-fed pigs averaged 3.3 roundworms at slaughter.

"2. Although worms were controlled, feeding hygromycin for 108 days failed to improve gains. In the unwormed group, hygromycin depressed daily gains 8% (control .48 vs. hygromycin 1.36 lb.) and reduced feed intake 5%. This depression in gains and feed intake was most pronounced during the period from 100 lb. to market. Feeding hygromycin to the wormed pigs had no effect on

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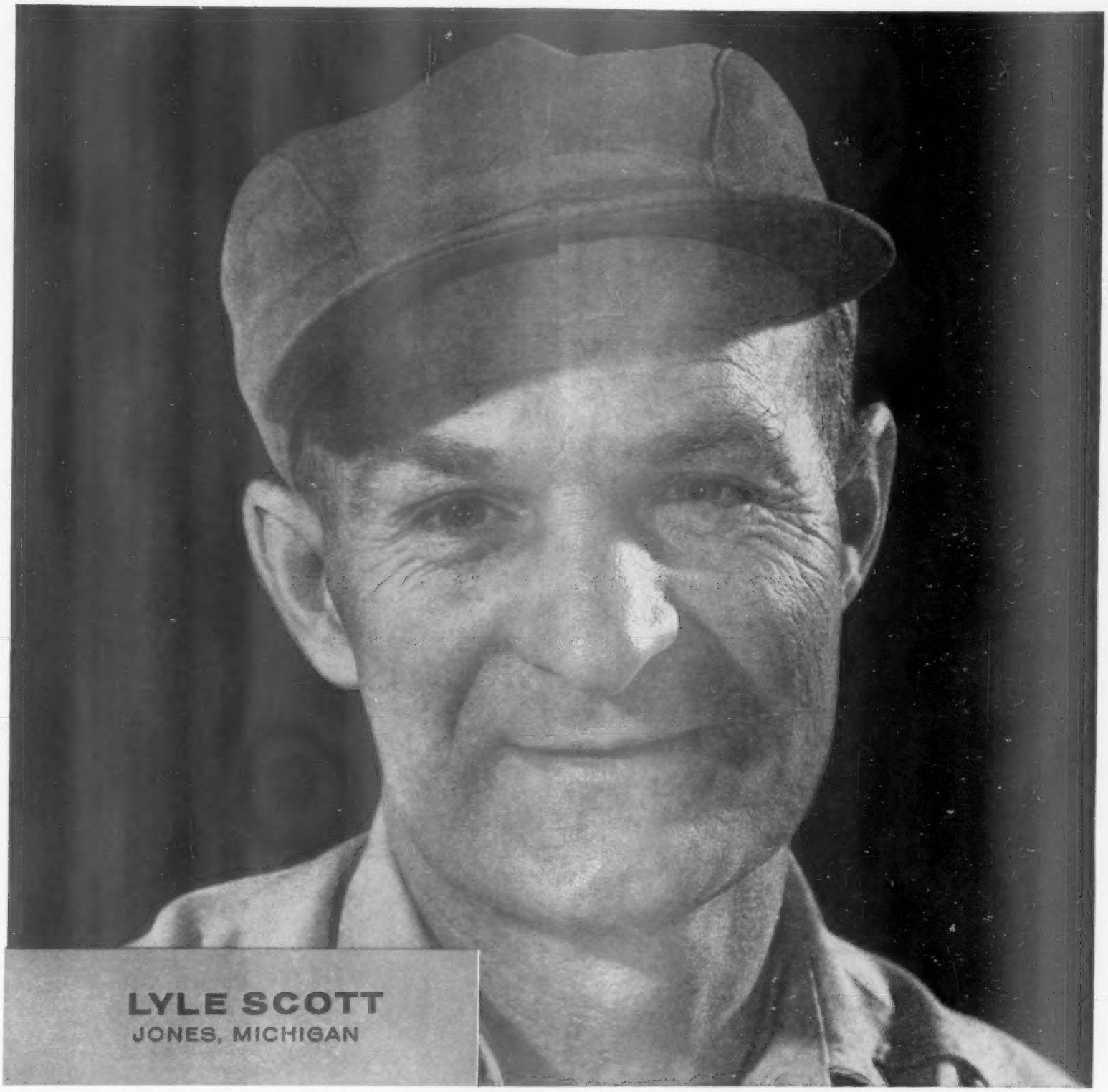

LYLE SCOTT
JONES, MICHIGAN

"85% of the salt I sell is Morton Trace-Mineralized"

Almost 85 lbs. out of every 100 lbs. of livestock salt sold by Mr. Scott, manager, Jones Farmers Cooperative, is Morton T-M Salt. Such a record of T-M sales over plain salt sales is outstanding. Therefore, we asked Mr. Scott to write an open letter to all salt dealers telling just what he does to promote T-M Salt. Here is his advice:

"We believe in T-M and would like to see our farmers use it 100% in their feeding programs . . . and some day we may reach that goal. At any rate, with about 85% of our tonnage in T-M now, we are making good progress.

"We like to sell T-M for free choice feeding even when formula feeds or home-mixed grains containing trace minerals are fed. We sell it as insurance against mineral deficiencies that can throw a feeding program off balance . . . which, of course, would hurt the farmer and our business," states Mr. Scott.

You, too, can sell T-M Salt to increase business. If you already handle Morton T-M Salt, take a leaf from Mr. Scott's book and you will increase both your business and your profits. Recommend Morton T-M to your customers. If you don't handle T-M but would like to, just write Morton Salt Company, Chicago, Illinois.

BEST ADVERTISED—BEST KNOWN!
As a Morton dealer your T-M sales effort is backed by consistent, down-to-earth advertising in leading farm and ranch publications. Radio sales messages also tell farmers and ranchers everywhere the benefits of using T-M Salt. Listen to the Alex Dreier radio show, "Topic for Today," every Saturday immediately following the "Farm and Home Hour."

MORTON T-M SALT

NEW HOME FOR QUADS—A rare set of quadruplet calves arrived by plane at Forrest, Ill., this week. They are the four male survivors of quintuplets born recently at a Crown Point, Ind., dairy farm, the first known quintuplet birth on record in the U.S. (Feedstuffs, June 21, page 92). Among those shown greeting the quads is Dr. Wayne Fluke, American Cyanamid Co. veterinarian, who will supervise the calves' health program. The animals will be fed out at the Honegger research farm and their career, already planned, includes training as an ox-hitch team for Honegger demonstrations at fairs, livestock shows and other agricultural events.

gains and reduced feed intake slightly (2.3%). Unwormed pigs fed hygromycin required 13 lb. more feed and wormed pigs required 6 lb. less feed 100 lb. of gain than the control pigs.

"3. Feeding a mixture of antibiotics for 108 days resulted in significantly faster daily gains (18 to 14% increase) than did the feeding of hygromycin.

"4. During the first 49 days of the experiment, hygromycin had no effect on gains when fed to unwormed pigs but increased gains 9% when fed to wormed pigs. During the same period, antibiotics increased gains 17% when fed to unwormed pigs and 10% when fed to wormed pigs.

"5. During the last 59 days of the experiment, hygromycin alone fed to unwormed pigs significantly depressed gains and reduced feed intake, and more feed was needed per 100 lb. of gain as compared to control pigs or those fed antibiotics. Similar effects were noted in the wormed pigs."

Urea in Feeds Totaled 64.1 Tons in 1957

WASHINGTON—Urea used in animal feeds was 64.1 short tons in 1957, according to the Business and Defense Services Administration, U.S. Department of Commerce. It was stated that consumption of urea in feeds has not changed greatly in recent years.

The report said that the annual capacity as of Jan. 1 for production of urea in the U.S. was 623,100 short tons and that additional facilities reported under construction and planned for completion in 1958-1959 will bring the total to 795,800 tons.

Capacity at the beginning of this year comprised nine plants, and new facilities will include three additional plants plus expansion of three existing installations. All 12 of the present or projected urea facilities are or will be at anhydrous ammonia establishments.

The 1957 production of urea was 15% over that in 1956, and represented 75-80% of capacity. Prospects for further growth in output during 1958 are favorable, although most of the projected new facilities are not scheduled for completion until late in the year, according to the report. Approximately 318,000 tons of ammonia were consumed in 1957 production of urea.

Projected expansion in urea capacity, scheduled for completion by early 1959, will provide sufficient supplies to permit a 58% increase over the 1957 level of supply.

U.S. Capacity, Production, and Distribution of Urea by Use, 1956-57
(Thousands of short tons)

	1956	1957
Capacity, end of year	**	623.1
Production	424.0	488.7
Distribution, total*	387.5	466.2
Total fertilizer use	180.5	243.1
Solid urea for direct application	88.3	101.0
Solid urea for fertilizer mixing	21.9	31.8
Urea solutions†	70.3	110.3
Other uses	207.0	223.1
Animal feeds	‡	64.1
Other domestic consumption	‡	99.0
Exports	‡	60.0
Production not accounted for	36.5	22.5

*Domestically produced urea only.
†Includes urea solutions for both ammoniation of mixed fertilizers and direct application.
‡Breakdown is not shown in order to avoid disclosure.
**Not available.

Poultry Group Officers

SACRAMENTO, CAL.—Arthur C. Kimber, Niles, Cal., was elected president of the California Poultry Hatchery Federation at the Western Poultry Congress in Santa Rosa recently. Other officers are Jack Stone, Dinuba, first vice president; Robert Zerller, Santa Ana, second vice president, and Lewis McDonald, Jr., Gerber, secretary-treasurer.

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Red Rose's "Golden Egg" promotion reaches your customers through farm magazine, direct mail and point-of-purchase advertising. It is a sound, sensible story that farmers will understand. Profit by tying in with this BIG Red Rose campaign.

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UP OR DOWN?

By Leonard W. Schruben
Agricultural Economist, Kansas State College

How Many Pigs This Fall?

The pig crop report released by the U.S. Department of Agriculture June 20 indicates intentions for fall farrowing. It provides feed manufacturers with an indication of the potential size of the hog-feed business they can expect during the last part of 1958 and the first half of 1959. Because of the importance of the farrowing estimates, it is well for you to become acquainted with them.

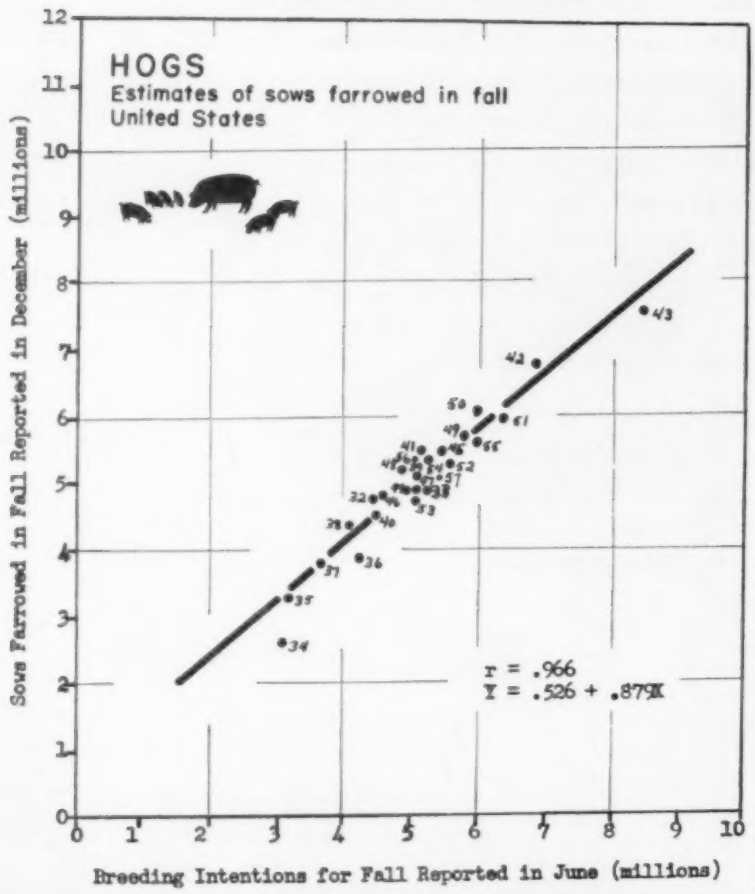
Of course, the word "estimate" means just that. Many things affect the size of a pig crop after farmers report their plans. Exhibit 1 will give you an indication as to what to expect this fall. As of June 20 the crop reporting board estimated that farmers intended to breed 5.9 million sows for fall farrowing. This would indicate an increase of 14% in the number of hogs which would be fed and for which feed manufacturers can expect to sell more hog feed this coming year.

Here is how Exhibit 1 was prepared: First, for any given year we found the breeding intentions for fall which were reported in June on the bottom scale. Next we read up until even with the sows actually farrowed in the fall shown on the left-hand scale. At that point we located the dot and labeled it with the year. Each dot on the chart thus represents a year. If each year measured to the average all of the dots would be on the solid line. Also, the solid line would run at a slope of a 45° angle with one end of it being at the lower left-hand corner of the chart.

As you can see, all the dots are not on the solid line nor does the solid line run through the lower left-hand corner. This means that changes were made over the years in farmers' intentions. The estimate, of course, is a good indicator of the trends because you can see the dots are not too far away from the solid line during most of the years. There are some discrepancies, however, that you should take into account when planning your operations for next year.

During years when farmers breed for large farrowings the estimates tend to overstate actual farrowings. During years when fewer sows are bred the estimates tend to understate the actual farrowings. The reports which we have been discussing are made by the crop reporting board, USDA, and are available if you want to write and request a copy from that agency.

EXHIBIT 1. Hogs: Estimate of sows farrowed in fall, U.S.



Power Capacity Hiked

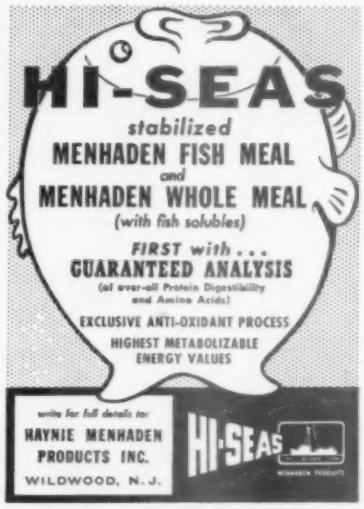
DECATUR, ILL.—The A. E. Staley Manufacturing Co. will add a new 7,500-kw steam turbine generating unit to power house facilities at its Decatur plant next year in a project now under way. E. K. Scheiter, president, said the project investment will be in excess of $500,000, and will increase the plant's electric generating capacity more than a third.

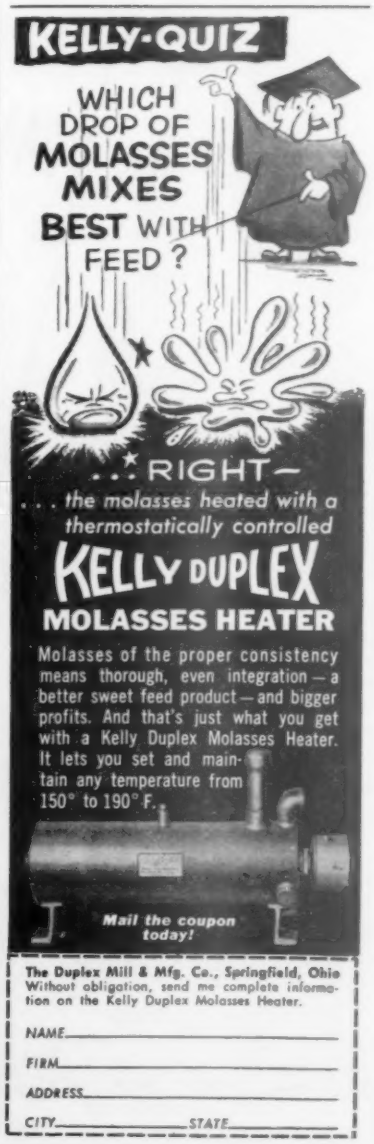
Peavey Names Winners In Recent Sales Drive

MINNEAPOLIS — Peavey Feed Mills, Minneapolis, manufacturer of Tone Feeds, has named 10 dealers and two territory managers as winners of its recent dealer growth program.

The program emphasized farm calls and service work, as well as live exhibits. Winners were awarded a four-day fishing holiday at Minaki, Ont. Winners are Antigo (Wis.) Flour & Feed; Mobile Feed Builders, Fairmont, Minn.; Follett & Leach, Coloma, Wis.; Champlin (Minn.) Feed Store; Kuehl Feed Store, St. James, Minn.; Kramer's Hatchery, Red Wing, Minn.; Wagner Feed Mill, Sunburg, Minn.; Jacobson Lumber Co., Brownsville, Wis.; Peavey Elevator, Tower City, N.D., and Peavey Elevator, Raymond, Minn.

The winning territory managers are Albert Habel, Wisconsin Rapids, Wis., and H. G. Soeldner, Waseca, Minn.

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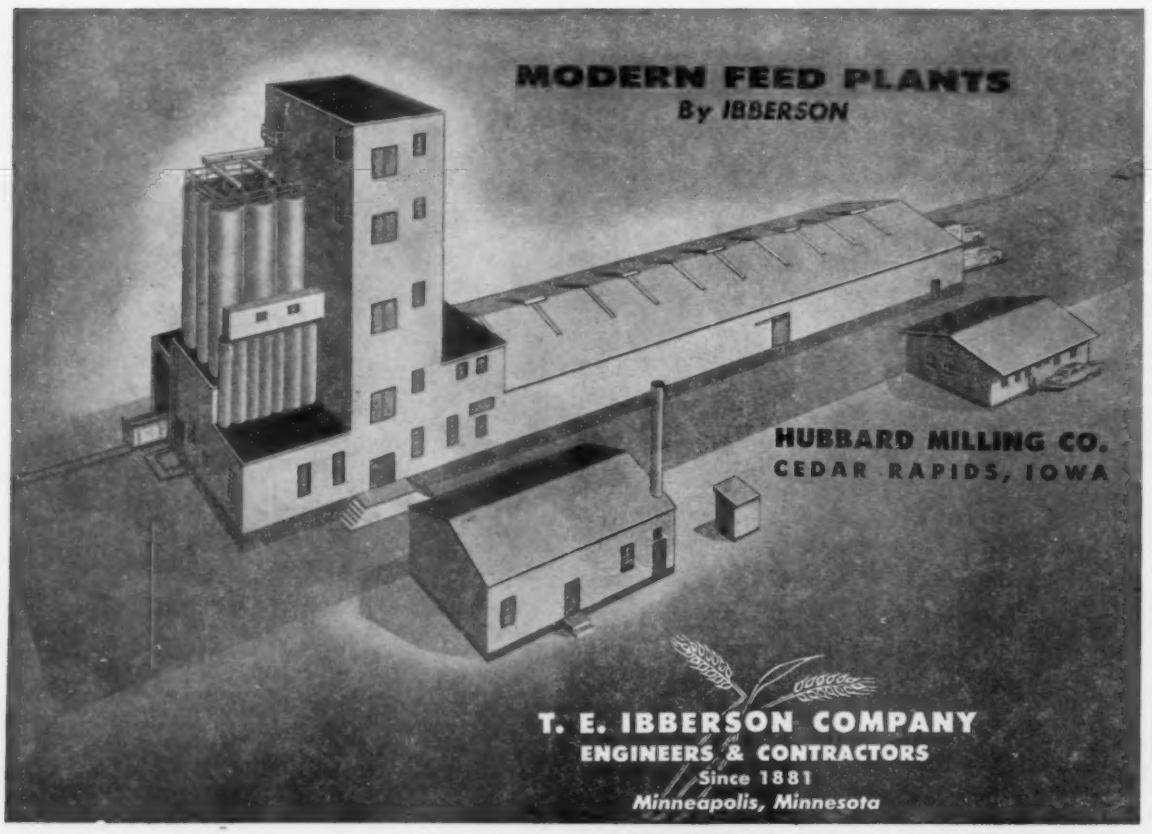


FISH SAID TO NEED TRACE MINERALS

SCRANTON, PA.—Fish in farm ponds appear to be good potential consumers of trace-mineralized salt blocks, according to a report from the International Salt Co., Inc., Scranton. According to the report, the U.S. Department of Agriculture has sponsored research which indicates that fish production in farm ponds is limited and unsatisfactory, partially because of a lack of sodium and the same trace minerals which are essential to livestock and poultry health. These trace minerals are cobalt, copper, iodine, iron, manganese, sulfate sulfur and zinc. Certain trace-mineralized salt blocks used for free-choice feeding of livestock seem to take care of the problem. Animal nutritionists at International Salt say that one 50-lb. block of Sterling Trace-Mineral Blusalt per acre of pond will take care of the deficiency for three months.

Ohio Swine Feeding Trials to Be Reported

WOOSTER, OHIO—Tests comparing hygromycin and piperazine phosphate as worming compounds for swine will be among the subjects discussed at the Ohio Swine Day Sept. 5 at the Ohio Agricultural Experiment Station here. About 500 hog farmers are expected to attend, according to L. L. Rummell, director of the station, to hear results of recent trials in which the two anthelminthics have been fed continuously at low levels.

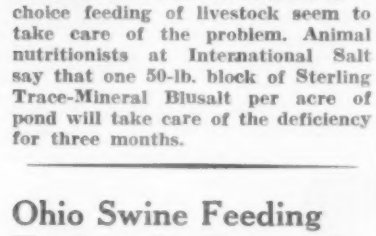
Also planned is a three-season report on the influence of feeding different kinds, combinations and levels of antibiotics and other feed additives in dry lot and on pasture. Other researchers will report on the effects of feeding low levels of stilbestrol in breeding-gestation rations and the relationship of these studies to the feeding of legumes.

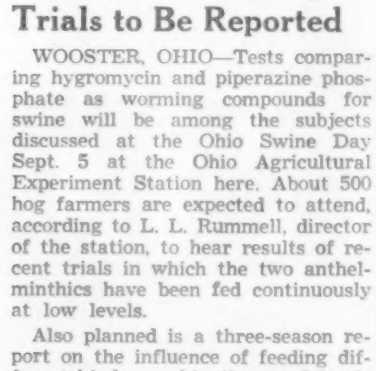
Another report will summarize the results of a three-year generation study conducted in dry lot. In this test hogs received either all-plant or plant and animal protein rations throughout. Performance has been measured through the fourth generation.

Grain Aeration Use Increasing in Volume

BOONE, IOWA—Aeration systems for grain are being installed by a growing number of grain firms.

The Rolfes Grain Aeration Companies, Boone, reports it has installed systems in four grain firms in Texas, three each in Iowa, Kansas and Nebraska, two each in Oklahoma, Illinois and Missouri, and one in Indiana and South Dakota.





MOREA Liquid Feed Supplement is a big profit item to the feed man who mixes it and sells it, and a low-cost, high-quality feed to the stockman or dairyman who buys it and uses it. MOREA makes money for the feed man and his customer.

More and more progressive feed men are finding it easy, economical and highly profitable to mix concentrated MOREA Pre-Mix with molasses to make this high-quality feed supplement for ruminants. It requires only a low capital investment for the proper, inexpensive equipment, including a pump, storage and mixing tanks, and a tank truck for delivery of the liquid feed to customers.

MOREA Pre-Mix, as sold to the feed manufacturer, is a balanced combination containing urea nitrogen, ethanol, phosphoric acid and essential trace minerals. Mixed with molasses and fed "free choice" to ruminants along with large amounts of roughage, some grain, minerals and plenty of water, MOREA produces bigger yields of better quality meat and milk at lower cost.

MOREA-fed animals are preferred by leading packers because of their better dressing percentage, higher carcass grade and less waste fat. Dairymen who feed MOREA report increased milk production at lower feed costs. MOREA Liquid Feed Supplement is a rich source of nitrogen and the only feed supplement that contains ethanol, the "hydrogen donor" that enables ruminants to make better use of dietary nitrogen and cellulose.

MOREA is easy to handle and offers the alert mixer-distributor an attractive profit. It flows freely even at below-zero temperatures, and does not attract flies or rodents. It will pay you to get all the facts on the many advantages of this new and different method of ruminant feeding. Mixer-distributorships are still available in certain areas.

MOREA® Liquid Feeds

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FEED SERVICE CORPORATION, Plant and Office: Crete, Nebraska

CONVENTION CALENDAR

(Continued from page 34)

versity of Missouri, Columbia; Dr. Leland Tribble, Animal Husbandry Dept.

Sept. 7-8—Grain & Feed Dealers National Assn., Sheraton-Jefferson Hotel, St. Louis, Mo.; chm., Alvin E. Oliver, 600 Folger Bldg., Washington 5, D.C.

Sept. 7-9—Louisiana Poultry Improvement Assn.; Jung Hotel, New Orleans, La.; sec., Clyde Ingram, University Station, Baton Rouge, La.

Sept. 10-11 — Maryland Poultry Servicemen's Conference; University of Maryland, College Park, Md.; chm., W. R. Rice, Poultry Department, University of Maryland.

Sept. 12 — Iowa Conference for Feed Salesmen and Dealers (formerly Iowa Nutrition Conference) Iowa State College, Ames, Iowa; chm., Dr. Walter Woods, Animal Husbandry Department.

Sept. 17-19—National Feed Ingredients Assn., Congress Hotel, Chicago, Ill.; sec., Peter W. Janss, 212 Equitable Bldg., Des Moines, Iowa.

Sept. 18-19 — Arkansas Formula Feed Conference; University of Arkansas, Fayetteville, Ark.; chm., Prof. E. L. Stephenson, Department of Animal Industry and Veterinary Science.

Sept. 21-30—World's Poultry Congress; Mexico City, Mexico; sec., Edward Karpoff, Agricultural Marketing Service, USDA, Washington 25, D.C.

Sept. 23-24—Iowa Poultry Hatchery Assn.; Veterans Memorial Auditorium, Des Moines, Iowa; sec., LeRoy Kruskop, 409½ Douglas Ave., Ames, Iowa.

Sept. 25-27—Pennsylvania Millers & Feed Dealers Assn.; Penn-Sheraton Hotel, Pittsburgh, Pa.; sec., Richard I. Ammon, P.O. Box 329, Ephrata, Pa.

Oct. 7-9 — Northeastern Poultry Producers Council Poultry Exposition and Convention; Farm Show Bldg., Harrisburg, Pa.; chm., Alfred Van Wagenen, NEPPCO, 10 Rutgers Place, Trenton 8, N.J.

Oct. 8-10—Texas Nutrition Conference; Texas Agricultural and Mechanical College, College Station, Texas; chm., J. R. Couch, Poultry Science Dept.

Oct. 9—Vermont Feed Dealers & Manufacturers Assn.; Agricultural Science Bldg., University of Vermont, Burlington, Vt.; sec., D. C. Henderson, Poultry Department.

Oct. 12-14—Kentucky Poultry Improvement Assn., and Kentucky Poultry Federation; Kenlake Hotel, Hardin, Kentucky; sec., John W. Tuttle, 730 Rose Street, Lexington, Ky.

Oct. 14-15—Virginia State Poultry Federation; Natural Bridge Hotel, Natural Bridge, Va.; sec., P. Paul Williams, 615 E. Franklin St., Richmond, Va.

Oct. 14-16—Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., L. E. Bopst, University of Maryland, College Park, Md.

Oct. 16-17 — Oklahoma Formula Feed Conference, Oklahoma State University, Stillwater, Okla.; chm., Dr. Rollin H. Thayer, Poultry Science Dept.

Oct. 20-21—California Animal Industry Conference, Fresno Memorial Auditorium, Fresno, Cal.; sponsored by University of California and California Hay, Grain & Feed Dealers Assn.; sec., John Gilmore, 1400 10th St., Sacramento, Cal.

Oct. 23-24 — Iowa Seed Dealers Assn.; Hotel Fort Des Moines, Des Moines, Iowa; sec., Bob Skinner, 928 Des Moines Bldg., Des Moines, Iowa.

Oct. 23-25—Nutrition Conference, Alabama Feed Assn.; Alabama Polytechnic Institute, Auburn, Ala.; chm., Merlin T. Bryant, Brundidge Milling Co., North Main St., Brundidge, Ala.

Oct. 31-Nov. 3 — Florida Nutrition Conference; cruise from Miami to Nassau, British West Indies; chm., J. P. Feaster, Department of Animal Husbandry and Nutrition, University of Florida, Gainesville, Fla.

Nov. 2-5—National Renderers Assn., Hotel Statler, Washington, D.C., sec., Miss Jamie C. Fox, 30 N. LaSalle St., Chicago 2, Ill.

Nov. 7—Washington Animal Industry Conference; Lower Columbia Junior College, Longview, Wash.; sponsored by State College of Washington, Lower Columbia Junior College and Washington State Feed Assn.; assn. mgr., J. G. Wilson, 814 Second Ave. Bldg., Seattle 4, Wash.

Nov. 12-14—Midwest Feed Production School; American Royal Bldg., Kansas City; sponsored by Midwest Feed Manufacturers Assn.; exec. vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Nov. 13-14—Cornell Nutrition Conference; Hotel Statler, Buffalo, N.Y.; chm., Prof. Charles Chance, Wing Hall, Cornell University, Ithaca, N.Y.

Nov. 14—Midwest Custom Milling School; American Royal Bldg., Kansas City; sponsored by Midwest Feed Manufacturers Assn., exec. vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Nov. 23-25—Western Grain & Feed Assn.; Hotel Fort Des Moines, Des Moines, Iowa; sec., Bob Skinner, 928 Des Moines Bldg., Des Moines, Iowa.

Nov. 30-Dec. 1—Tennessee Feed Manufacturers Assn.; Noel Hotel, Nashville, Tenn.; sec., Charles H. Warfield, 602 American Trust Bldg., Nashville 3, Tenn.

1959

January 24-26—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis, Ind.; sec., Fred Sale, 600 Board of Trade Bldg., Indianapolis 4, Ind.

Jan. 26-28—Southeastern Poultry & Egg Assn., Atlanta, Ga.; sec., Har-

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Jan. 28-30—American Dehydrators Assn., Shamrock-Hilton Hotel, Houston; exec. vice pres., Joseph Chrisman, Board of Trade Bldg., Kansas City 5, Mo.

Jan. 29-30—Oregon Animal Industry Conference; Oregon State College, Corvallis; sponsored by Oregon State College and Oregon Feed & Seed Dealers Assn.; sec., Russ Hays, 702 Lewis Bldg., Portland, Ore.

Feb. 6-7—Minnesota Turkey Growers Assn.; Leamington Hotel, Minneapolis; sec., A. E. Eisenmenger, 2200 University Ave., St. Paul, Minn.

Feb. 12-13 — Washington State Feed Assn.; Leopold Hotel, Bellingham; mgr., J. G. Wilson, 814 Second Ave. Bldg., Seattle, Wash.

Feb. 13-15—Institute of American Poultry Industries' Fact Finding Conference; Municipal Auditorium, Kansas City, Mo.; Institute of American Poultry Industries, 59 E. Madison, Chicago 2, Ill.

Feb. 22-24—Colorado Grain, Mill & Feed Dealers Assn.; Shirley Savoy Hotel, Denver, Colo.; sec., R. B. Kelley, 714 Cooper Bldg., Denver 2, Colo.

Feb. 23-26 — Colorado Livestock Days; Colorado State University, Ft. Collins, Colo.; chm., Dr. Lamar Esplin.

Feb. 24-25—Virginia Feed and Nutrition Conference; Hotel Roanoke, Roanoke, Va.; co-chm., Wm. G. Ritchie, J. S. Ritchie & Sons, Petersburg, Va., and Paul M. Reaves, professor Dairy Science, Virginia Polytechnic Institute, Blacksburg, Va.

March 1-3 — Ohio Grain & Feed Dealers Assn., Inc.; Neil House, Columbus, Ohio; sec., G. E. O'Brien, 710 N. Ohio Street, Greenville, Ohio.

March 11-13—Midwest Feed Manufacturers Assn.; Muehlebach Hotel, Kansas City, Mo.; exec. vice president, Lloyd S. Larson, 20 W. Ninth Street Bldg., Kansas City 5, Mo.

April 30-May 2—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., O. E. Case, 901 Wiley Bldg., Hutchinson, Kansas.

May 8-10 — Grain Processing Machinery Manufacturers Assn.; Chicago; sec., Raymond J. Walter, 511 Fifth Ave., New York 17, N.Y.

May 11-13—American Feed Manufacturers Assn. Convention and National Feed Industry Show; Conrad Hilton Hotel, Chicago; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 4, Ill.

June 7-9—Indiana Grain & Feed Dealers Association; Sheraton Hotel, French Lick, Ind.; sec., Fred Sale, 600 Board of Trade Bldg., Indianapolis, Ind.

BULLETIN BOARD

(Continued from page 38)

parasites block small blood vessels or penetrate intestinal walls. Still others may damage the animals' livers or lungs.

As preventive measures, young livestock should be kept away from old pastures, low swampy ground, stale ponds, unclean water tanks and old barn lots.

Numerous new medicines, for direct application or use in feeds, are available now, both for preventing internal parasites and in treating infected animals.

◆

Fog Cools Birds

Progress is being made toward finding the ideal design of fogging installations for cooling poultry houses during hot weather, according to Oklahoma State University researchers.

For effective fog cooling of poultry shelters, they say, a study shows that fogging nozzles should be relatively close to and only slightly above the zone to be cooled. Wind movement through the fogged space should be controlled for maximum cooling.

Most important, the scientists report that applying the fog directly to the chicken can reduce feather temperatures as much as 10 degrees.

◆

"Cooler" Dairy Feeds

A dairy cow needs an adequate amount of feed, especially in hot weather, but the concentrates that go along with green chop or silage, or good alfalfa hay, should be low in fiber during the hot spells, according to Ralph Bonewitz, extension dairyman at Kansas State College.

It is not unusual for milk production to drop as much as 20% or more during the hot weather, he points out, aand even the fat and solids-not-fat percentage in milk tend to be lowered. In fact, whenever the temperature goes above 80 degrees, the dairy cow begins to suffer.

Keeping cows in a dry lot without feed or in a poor pasture close to the barn at night doesn't make for high production. Shade will pay for itself in a short time during hot days. Producers should be sure the shade is located where there are good wind currents; should keep clean, fresh water before cattle at all times, and keep a tight rein on fly control.

◆

New Turkey Economics

Some new information on the economics of turkey production has just been compiled from records kept by 46 North Dakota turkey producers. For example, it was noted that the major factors affecting returns were feed and medicine cost per 100 lb. of turkey raised, and percent of death loss.

Important to note, too, was the report that returns to labor and management among these 46 flock owners amounted to $1 per bird. The average producer received $1 for his labor and management for each $4 invested in production.

Flock size variations included in the study covered 14 small flocks, 18 medium and 14 large flocks. The small flocks averaged 825 poults started, the medium 1,735 poults and the large flocks 4,480 poults started. All of the producers raised broad breasted bronze turkeys.

The study, which showed that turkeys definitely have a place in North Dakota agriculture, has been put into a bulletin, No. 414, which is available through the Agricultural Information Office at North Dakota Agricultural College, Fargo.

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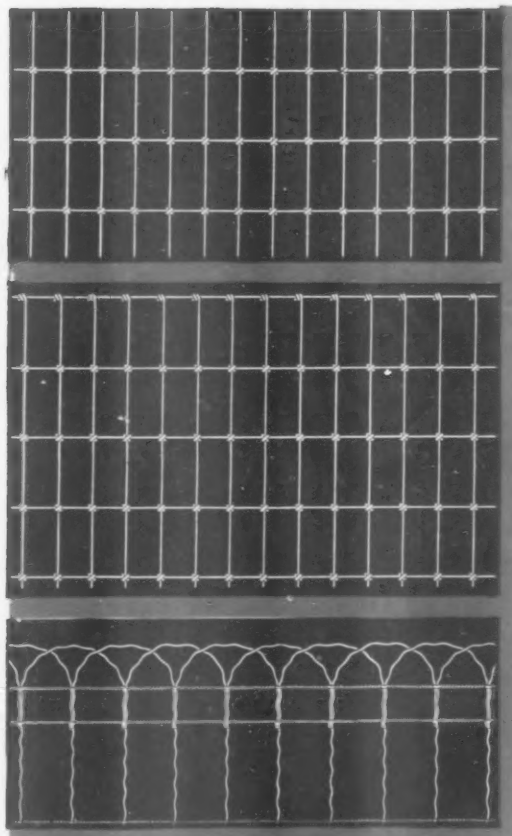

In the yard...

NON-CLIMBABLE FENCE. A lawn fence designed for contemporary living. Accents the horizontal, flatters the vertical lines of any style of home. The wires, spaced just right to assure protection, are Galvannealed for long-lasting beauty. This attractive fence safeguards children, discourages trespassers and establishes boundary lines. Comes in 36", 40", 48", 60", 72" and 84" heights.

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* TRADEMARK

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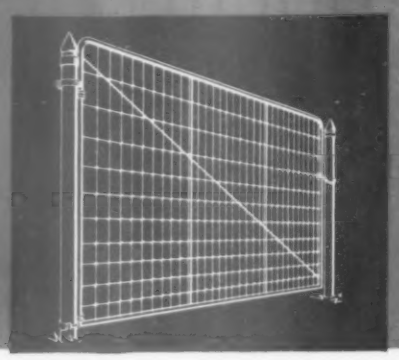

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CEDAR RAPIDS, IOWA

It Pays to Maintain Good Public Relations

By Al P. Nelson

It had been an especially busy and hot day at the feed mill, and when Joe got home that evening, he really enjoyed a shower, and then a delicious roast chicken dinner, lemonade and sherbet. His twin sons, too, enjoyed the meal for they ate rather than argued, which was always a favorable sign.

But, Mary, Joe's slender and blue eyed wife, seemed worried and even a little preoccupied.

"That's a swell meal, Mary," Joe said finally, folding his napkin, his face wearing a look of contentment. "You sure are a good cook."

"Do you really think so?"

"Why, of course, I do. I wouldn't say so if I didn't mean it. You know that."

"Well, I was just wondering."

Joe looked at his wife, and then at his boys, and his face wore a puzzled expression. "Isn't she a good cook, boys?" he asked.

"Yes!" chorused the boys.

But even this acclaim did not brighten Mary.

"Now this has gone far enough," Joe said. "What gave you the idea I didn't like your cooking?"

Mary sighed. "Well, I was going through your pockets in your second best business suit today and wanted to press it for you. And—and I found tickets for three church suppers next week. Then I got to thinking that you've been going to an awful lot of church dinners this summer. Sometimes you take us with you and sometimes you don't. It—it can only mean one thing—you don't like my cooking any more, so—so you take every excuse you can get to go out to eat." Mary looked close to tears. "And I work so hard to cook things you like."

Good Public Relations

Manlike, Joe opened his mind and let the winds of feminine peculiarities sweep in. "Gosh," he blurted, "I never knew you'd look at it like that, Mary. I have to go to a lot of those church dinners. It's good public relations for me."

"I know all that," Mary said a little sadly. "But do you have to go to so many?"

"I'm afraid I do," Joe said. "I can't slight anyone. And Mary, I have met many farmers at those dinners and got some dandy new customers, too. It's something every business man must do, if he wants to be on his toes."

"Sometimes I wish you weren't in the feed business," Mary blurted out. "Sometimes I wish you had a corporation job like other men and worked 40 hours a week, so then you could be home with us more."

"Yeah, I've felt that way myself now and then," Joe said. "Especially when I have trouble collecting money due me and when feed shipments don't arrive on time and many other things. And at income tax time, with all its red tape. But then when I have good days, and things really roll, when I get new customers and the cash register keeps ringing all day long, then I'm the happiest man in the world. That's life, up and down. I guess it can't be any different, or can it?"

"I saw a sign once," Mary said. "It said 'Work hard 40 hours a week and then maybe you can get to be boss and work 70 hours a week for very little more pay.' But you work longer than 70 hours a week, Joe."

"I do not. You can't count going to church suppers working. I have to eat somewhere. And lots of times you and the twins go along. You seem to enjoy those dinners, too."

"Oh, I do, now and then. But not so many. Every true housewife likes to make lots of meals in her own kitchen. Can't you understand that?"

"No, I can't," Joe said. "If I were a woman and my husband came home and said he was taking me out to dinner, I would jump at the chance."

"You don't know much about women," Mary said. "Especially me. A woman likes to shop at a sale once every two weeks, but she doesn't want to shop for bargains every day. She gets tired of it."

"I get tired of lots of things in my business, too," Joe said slowly. "But I have to put up with them. Now about this matter of church dinners. I like them, and I like to meet and talk with farmers, and they like to have me there. Some of them even tell me they can spot every business man in town by his actions. Some of those business men never go to farmers' doings and the farmers know it, and hold it against them."

"They shouldn't."

Obligations of a Feed Dealer

"Maybe not, but farmers are that way. When you are in business, especially selling to farmers, you've got certain obligations, namely to be deeply interested in what they like and are doing, and you've got to attend many of their dinners and meetings."

"When I grow up," Joe Jr. said to Jimmie, "I'm never gonna get married. I don't wanna argue all the time like Mama and Papa do."

"We are not arguing!" Joe said sharply. "How many times do I have to tell you that? We are only discussing problems."

"Well," said Mary, "now that we have threshed this matter out, we might as well make up our minds we are going to three church suppers next week. Chances are one will be roast beef, another fried chicken and the third perhaps chopped beef. Looks like I'll have to work veal, pork and seafood into the rest of the meals we have at home."

Joe smiled happily. "One thing I admire about you, Mary, is that you can always adjust to a problem. I have to do that in business many times."

"I have to adjust to a husband who wants his way, too," Mary said wisely, "although I'm warnin' you," and she smiled, "I'm going to hold out now and then just for the satisfaction of having my way once in a while."

"As though you didn't most of the time," Joe thought. But being a man, he just smiled sweetly and said nothing.

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FEEDER FINANCING

(Continued from page 32)

were furnishing seed, fertilizer and labor for harvesting.

But, while not new in concept, the tremendous movement in this direction in the handling of farm products has taken place during the past decade. All of you are familiar with the broiler industry. Similar movements are developing in the production of eggs and hogs, and preliminary approaches have been made in the cattle business.

Integration through Financing

In other areas, integration is proceeding through the medium of finance. A cottonseed oil mill, a cotton gin, a grain elevator company finds that by financing a farmer's production requirements it will have better than a fair chance at purchasing, processing and storing his products. In many cases this financing extends beyond the limit of the specialty of the lending company and includes the whole scope of the farmer's agricultural operations.

Thus the elements are present which give cause for some people to envision the possibility of a complete take-over by large business interests of all processes of distribution of farm products and, as well, all the processes of production, save perhaps the ownership of land and the furnishing of a modicum of labor by the land owner—or in other words, reducing the American farmer to the position of a hired hand.

Farmer Enters Business

But while this "consolidation" of business toward the farm has been taking place, there also has been a counter-movement which has emanated from the farm itself and which has had the effect of moving the farmer into the field of business. This process is not new either. All of us are familiar with Sunkist oranges, Diamond walnuts, Sun-Maid raisins and other such standard brands from the earliest days of our youth. These brand names were developed by farmer organizations in California created originally for the purpose of bridging the gap between the farm and the consumer.

This movement has expanded tremendously from its early beginnings and today in Texas, for example, farmer organizations are handling a fairly high percentage of the production of cotton, cottonseed, citrus fruit, wheat, milo maize and other grains. In Texas and in many other areas of the country, farmers also are utilizing cooperatives for the purchase of such supplies as gasoline and oils, machinery, equipment, and other supplies used in their farm operations.

Regardless of what one may think of farmer cooperatives, the fact remains that they are here, they are strong, and very likely they will continue to grow and develop. They are as much a part and parcel of "consolidation" as any other of its many business ramifications.

Thus, we have before us the twin consolidations, one from business to the farm and the other from the farm to business, each having developed in answer to the basic need for increased efficiency in the production and handling of our farm products.

What Do Changes Imply?

What are the implications of these changes? Surely it is of basic importance that the agricultural economy never has been static; also that often it has bee sick, and, therefore, any change may offer the potential of improvement. As Washington Irving in "Tales of a Traveler" said in 1824: "There is a certain relief in change, even though it be from bad to worse; as I have found in traveling in a stage-coach, that it is often comfort to shift one's position and be bruised in a new place."

And so, while many alarmists appear to be greatly concerned over these trends, I venture the opinion that in themselves they do not offer a serious threat to our basic concepts of farm economy.

In the first place, increased efficiency in production and distribution cannot be harmful. It lowers the price to the consumer. This in turn broadens distribution, as example of tremendous increased broiler production demonstrates. Some 1.3 billion broilers per year consume approximately 35 times the amount of feed as did the 34 million in 1934, thus expanding enormously the market for grains produced on our farms.

Assuredly, also, the hazards of farming are reduced. A broiler producer today need have little fear of losing more than a very small percentage of his production by disease if the procedures prescribed by the supervising organizations are followed carefully.

But we cannot stop and rest with this optimistic approach. The new concepts do have elements of danger to American agriculture as we have known it. I heard a statement recently from an individual rather high in the echelons of agriculture to the effect that in the U.S. "individualism has outlived its usefulness in agriculture." I personally do not go with that, and I don't believe you do either.

Retain Farm Independence

It is my opinion that these changes must be kept in balance to the extent necessary to prevent this loss of individualism from taking place, or let's say it another way: we must do whatever is necessary to retain the basic independence of American agriculture and to retain the same basic independence of American business both small and large.

If this may be done and all the blessings of increased efficiency retained, then the basic goal we are seeking may be achieved.

How may this be accomplished? Assuredly, the first principle is to allow continued development of agriculture and business independent of monopolistic controls. We all know from our history and economics books that in late nineteenth century when

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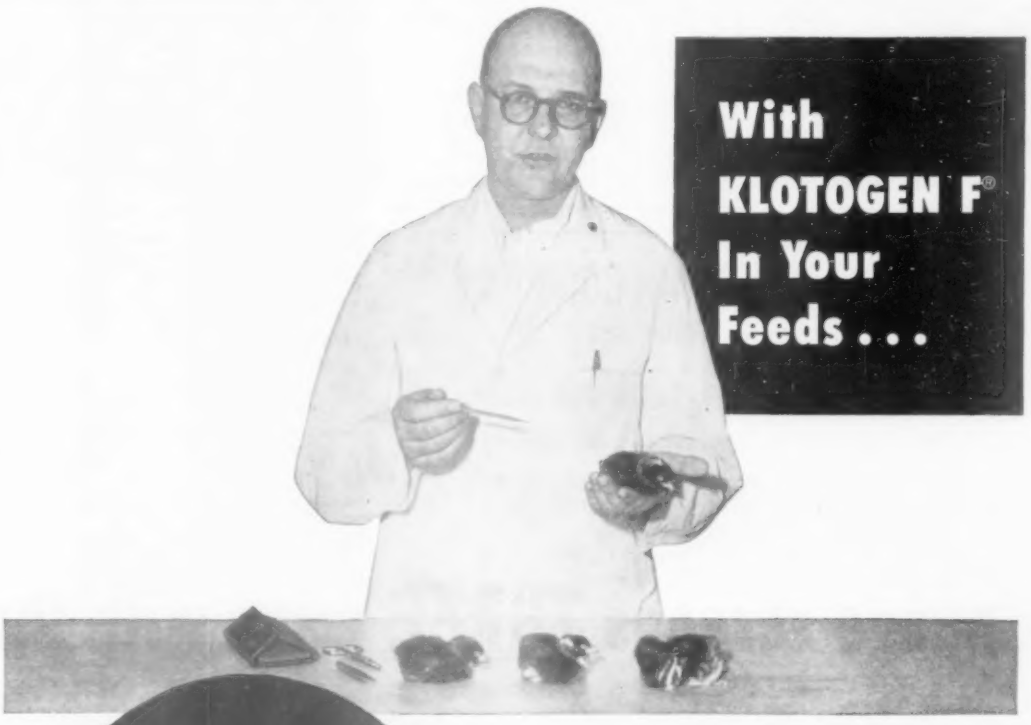

Poultry Diseases Can Be Less Serious!

Vitamin K (the anti-hemorrhagic vitamin) plays a very important part in poultry health, feed conversion . . . and consequently in making more satisfied customers!

Tests prove that vitamin K in broiler feeds greatly improves birds' resistance to disease—*providing the vitamin K is supplied in adequate amounts and in a form that can be easily absorbed.* If not, the resulting vitamin K deficiency helps to increase the severity of infectious diseases. Adequate supplies are also important during times of stress or disease when hemorrhagic disease can occur, as in coccidiosis, dubbing, and debeaking . . . or when enteritis complicates absorption problems.

Continuing changes in poultry ration formulas and feeding practices have combined to limit the amount of usable vitamin K in the high-energy broiler rations of today. To further complicate the problem, adequate levels of fat-soluble forms are often difficult to maintain in feeds.

To eliminate this problem of uncertainty, many feed manufacturers now depend on KLOTOGEN F, the *water-soluble* synthetic form of vitamin K produced by Abbott Laboratories.

Recent scientific tests indicate the value of KLOTOGEN F in reducing death losses during outbreaks of cecal coccidiosis . . . the poultry disease which causes severe destruction to the intestinal and cecal linings. When adequate amounts of KLOTOGEN F were fed, death losses were 0 to 7%, compared to 13 to 60% of chicks on a vitamin K deficient diet.

KLOTOGEN F does a superior job of protecting flocks against vitamin K deficiencies. KLOTOGEN F is reported to be 3 to 6 times as effective as ordinary fat-soluble menadione in poultry feeds. And, when high-level sulfa medications are used, this superiority is up to 10 times greater.

To avoid any question of adequate and completely usable vitamin K in your feeds, make sure they contain KLOTOGEN F! For more complete information about this superior form of vitamin K, write or call the Chemical Sales Division, Abbott Laboratories, North Chicago, Illinois.

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monopoly in business ran rampant, the situation became so serious that the government itself stepped in, and through the media of the Sherman and Clayton anti-trust laws prevented the swallowing up of all independent business by the great monopolistic trusts. I believe the same thing could happen here, and that if the integration of business toward the farm should offer a serious threat of destroying the basic concepts of American agriculture as we have known them, the government would step in here also, and we would have legislation on the order of the anti-trust laws to break it up.

This would not be a satisfactory answer. How then may these otherwise desirable trends be developed except through monopoly?

Finance

Well, there are a number of basic ways, but in my judgment one of the most important of these is the matter of finance. It is apparent to begin with that full integration toward and on the farm may be achieved only by interests with unlimited financing.

A small feed manufacturer, for example, with limited capital, finds it difficult to carry the heavy burden of financing his own operations and those of all his customers as well. He is faced with the handicap not alone of insufficient capital to carry the load, but also with the hazards of carrying on a big credit business—and all too often he is ill-equipped with experience and personnel to take on this responsibility.

If he bucks the double handicap, he eventually may eliminate himself from the picture and thus invite monopoly to move in. It therefore is of prime importance that he, the feed manufacturer, the feed dealer, the broker and all others connected with the process of distribution, should retain financial independence.

It also is necessary that the farmer maintain his financial independence. And as long as we have these two freedoms from financial control, freedom in the manufacturer, processor and middleman, freedom in the producer, it will be difficult indeed for monopolistic controls to be applied successfully. Losing these freedoms, we then will be faced with the inevitable results.

What are the tools by which these freedoms may be retained? You know of the banking and financial institutions which serve our communities. A banker generally is concerned with the safety of his loan and not with the tying up of all phases of the operations of his customer. Thus, as long as the local banker is available and is ready, willing and able to finance agriculture and business, monopolistic controls will be difficult to apply.

Farm Credit Groups

In addition to the local banker there are the institutions which I represent who make loans to farmers and ranchers and discount the paper with the federal intermediate credit banks. As you know, this financing is handled through production credit associations and private loan companies. They make loans to farmers and ranchers and discount their paper with the federal intermediate credit banks. These banks in turn obtain their funds from the sale of bonds to banks, insurance companies, and other investors across the country.

Production credit associations are owned by farmers and because of this are very responsive to their requirements. Their directors and loan committees are made up of farmers, and their successful operations over the past 25 years attest to the fact that farmers themselves are fully capable of operating their own credit business.

For long term credit, there are, of course, the national farm loan associations and their wholly farmer-owned federal land banks. Credit of this type also is available from insurance companies and many other financial institutions.

These organizations all—commercial banks, production credit associations, private loan companies, national farm loan associations, land banks, insurance companies—are in the credit business on a professional basis. They have no axe to grind otherwise, and the prosperity of the farmer is one of their first concerns. They want him to sell in the highest market; their own interests are tied closely with his freedom to deal with the world in the fullness of freedom and not with someone who has financed him in order to tie him down.

Thus, if full use is made of credit facilities and temptation is resisted to accept credit which appears to come easy because of the strings attached, the road ahead may be kept open, the trend to monopoly may be sidetracked, and independent business and agriculture may continue to prosper.

HOGS FLOWN TO 4-S CLUB IN ECUADOR

FAIRFIELD, FLA. — A shipment of 75 purebred Duroc hogs recently left the Henry Gatrell Duroc Farms of Fairfield to be flown to Ecuador and given to 4-S members. The 4-S is the equivalent of the 4-H in the U.S. The shipment of 75 gilts and boars will be distributed by the International Cooperation Administration. Mr. Gatrell explained that he donated the hogs when he learned that the average farm family in Ecuador has an income of less than $40 a year. "Some of the 4-S members in small farm families," he said, "will receive a hog worth twice as much as their annual family income."

Fortify your feeds with

DIAMOND V BRAND

LIVE YEAST CULTURE

(Especially Prepared for Dry Mix Feeding)

Supplies: Vitamin B_{12} activity, live yeast digestive enzymes, B complex vitamins, plus other potent unidentified factors. Improves appetite, digestion (including rumen aid), health, growth, production. Increases feed utilization — lowers feed cost.

Live yeast values improve feeding results in recent State conducted tests.

New Yeast Folder Available

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MILLFEEDS, GRAINS AND GRAIN PRODUCTS

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Change screens THREE ways with the JAY BEE

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1. Electric "push button"—instant, automatic, without stopping the mill. Controls can be located anywhere.

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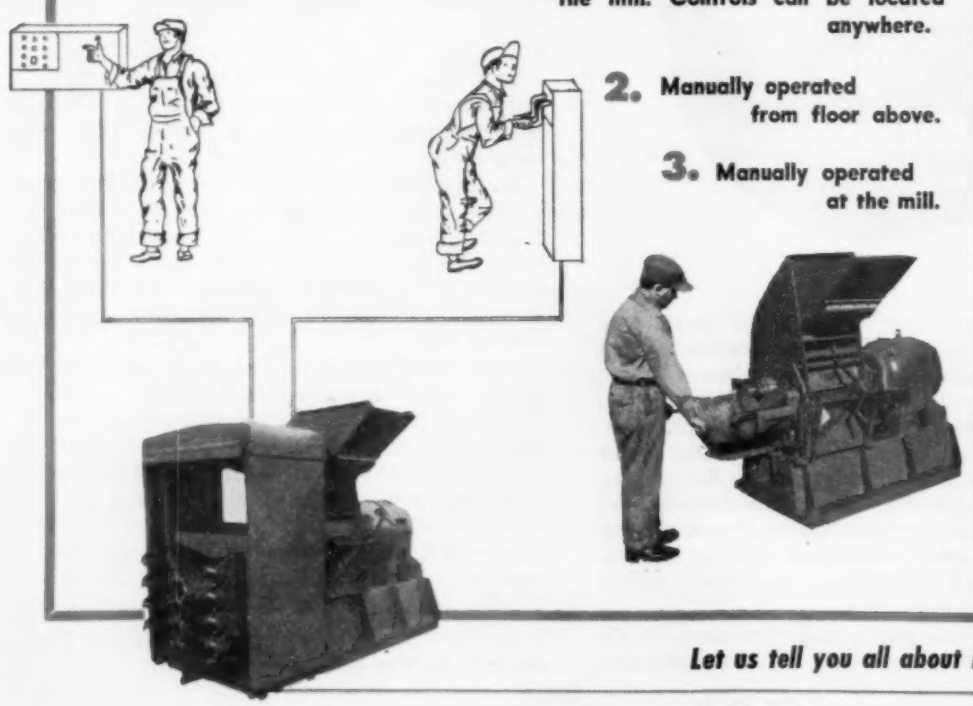

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HAMMERMILL

Whatever method you choose—whatever the grinding job—Jay Bee is still the standard of comparison for high capacity . . . low operating cost . . . trouble-free performance . . . long life.

- **"Super-matic" magazine holds four screens.**
- **"Super-matic" has separate motor driven fan—all the power of the mill motor goes into the grinding.**
- **Every Jay Bee mill gives you "Texture Grind" — horsepower for horsepower, screen for screen, a Jay Bee is unexcelled for consistently uniform texture of grind.**

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Please send me full details on the Jay Bee "Super-matic" Hammermill, and the name of my nearest Sedberry representative.

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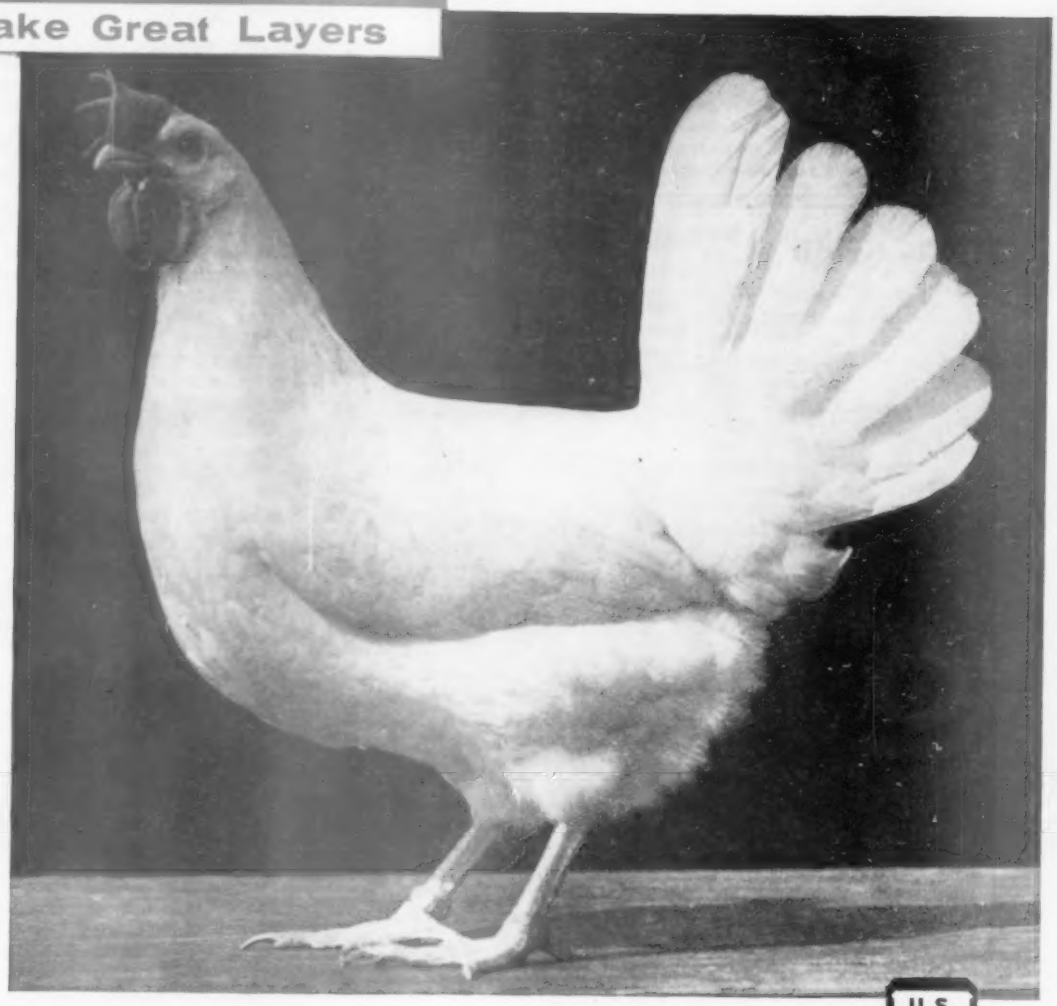

How to Build Your Feed Tonnage with SATISFIED BUYERS

BABCOCK HEALTHY Chicks

U. S. Pullorum-Typhoid CLEAN

Recommend

BABCOCK BESSIES...

the layers that mean PROFIT to your customers

Building a satisfied customer depends on three factors:

1. The kind of management a poultryman practices.
2. The feeds used at various stages of a layer's development.
3. The strain of birds he is housing.

You have little control over the first factor. With the second, you can lend the advice and assistance of your years of experience with the feeds you offer.

With the third, you can recommend to your customer the layers that give him the BIG return on his investment in feed . . . that cause him to enlarge his flock, *and his feed orders!*

BABCOCK BESSIES

Poultrymen coast-to-coast have found that Babcock Bessies combine the following profit elements better than any commercial egg layer ever developed:

- SIZE OF BIRD — about 3.5 lbs. at first egg . . . 4.4 to 4.7 lbs. at 1 year. Just the right size to give good feed conversion and big eggs without tiring.
- RATE OF LAY — 235-270 eggs yearly per bird.
- PERSISTENCY — 14-15 months of continuous high lay.
- EGG SIZE — 82-85% large and extra large during first 12 months. From 4th month, 92-95% large and extra large.
- EGG CHARACTER — Large chalk-white eggs with high "I.Q." (interior quality) . . . the kind housewives demand . . . usually candle over 95% Grade A and AA.

RANDOM SAMPLE TESTS SHOW BABCOCK BESSIES ARE TOPS!

1956 — Three Year Award for highest average profit over feed and chick cost, Central New York

1957 — Three Year Award for highest average profit over feed and chick cost, Western New York

1957 — First Quartile for all factors, Western New York

1957 — First and Second Awards for egg production per pullet housed, Florida

1957 — First Award, New Jersey Flock Mating Test

1958 — Our records look better yet!

Babcock Bessies Are Available from Coast to Coast from "Bessie Hatcherymen"

BABCOCK FRANCHISE HATCHERIES

EAST
Babcock Hatchery
Lancaster County Branch
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Thomas Mack & Sons
West Sunbury, Pennsylvania
Melini's Vineland Farms & Hatchery
Vineland, New Jersey
Sterling Hatchery
Sterling, Ohio
Stutz Poultry Farm
Clayton, Ohio

SOUTHEAST
Babcock Gulf Coast Hatchery
Quincy, Florida
DeWitt's Mississippi Hatchery, Inc.
Tupelo, Mississippi
Farmers Cooperative Exchange, Inc.
Columbia, South Carolina
Feather Hill Farm
Dade City, Florida
Forrest County Cooperative
Hattiesburg, Mississippi
Harrold's Hatchery, Inc.
Winterville, Georgia
Hodgenville Hatchery
Hodgenville, Kentucky
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Jonesboro, Tennessee
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DeWitt's Zeeland Hatchery, Inc.
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Globe Hatchery
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Johnson Chick Company, Inc.
Racine, Minnesota
Johnson Sunshine Hatchery, Inc.
Mapleton, Minnesota
Roy B. Johnson Hatchery
Buffalo Center, Iowa
Lebanon Electric Hatchery
Lebanon, Indiana
Leonard's Hatchery
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Meeker Hatchery
Fort Dodge, Iowa
Mettling's Hatchery
Slayton, Minnesota
Peck's Hatchery & Poultry Farm
Baraboo, Wisconsin
Richards Hatchery & Feed
Stewart, Minnesota
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Rushford, Minnesota
Simpson Hatchery
Mitchell, South Dakota
Simpson Hatchery
Fairmount, North Dakota
Simpson Hatchery
Harvey, North Dakota
Storey Hatchery & Seed Co.
Nampa, Idaho
Sunny Chix Hatchery
Filer, Idaho
Swanson Leghorn Farm
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Waukon Hatchery
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SOUTHWEST
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Airport Farm and Hatchery
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Newberg, Oregon
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Hogsett Poultry Breeding Farm
Pomona, California
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Spanish Fork, Utah
Seattle Hatchery
Seattle, Washington
Wilson's Hatchery
Lyon's, Oregon

CANADA
Edward's Hatchery
Edmonton, Alberta, Canada
Fleming Farm, Ltd.
Beamsville, Ontario, Canada
Mallett's Poultry Farm & Hatchery
Palmerston, Ontario, Canada
North-West Chick Hatchery
Clearbrook, British Columbia, Canada
Sunnymeade Poultry Farm
Norwich, Ontario, Canada
Whitney Farms and Hatchery
Milverton, Ontario, Canada

WRITE for our 48-page catalog and Bessie folder to help you tell your customers about Babcock Bessie. We will be glad to send others on request for the convenience of your customers.

Babcock Poultry Farm, Inc., Box 286, Ithaca, New York

Worth Looking Into

New Products
New Services
New Literature

This reader service department announces the development of new and improved products, new services and new literature offered by manufacturers and suppliers. Claims made in this department are those of the firm concerned. Use the accompanying coupon to obtain the desired information.

No. 7097—Grain Drier

The Hess Co. has introduced a continuous flow grain drier with capacities of 165 bu. and 250 bu. per hour and which is either gas or oil fired. The units—called by the trade name of "Capacitor" models—incorporate all the major features of the Hess custom driers which the company has been supplying many years, according to company officials. The new drier can be installed with no special equipment and can be completed in as little as three days. Secure details by checking No. 7097 on the coupon and mail it to this publication.

No. 7101—Reusable Pail

The addition of a reusable pail as the 25-lb. size container for four of its dairy cleaners has been reported by the B-K Department of Pennsalt Chemicals Corp. The pail is constructed of hot dipped galvanized steel. Rust-resistant seams and a riveted bail handle are features of the pail. Check No. 7101 on the coupon and mail it to secure details.

No. 7098—Feed Supplement

A granular dust-free "Coronet Defluorinated Phosphate (CDP)" product is being introduced by the Coronet Phosphate Co. The product carries these screen specifications: Minus 14 mesh, bagged—100%, bulk—100%; minus 200 mesh, bagged—25%, bulk—10% (guaranteed screen analysis plus or minus 5%). "Granular CDP" flows evenly through any equipment, say company officials. They continue: "Dust is eliminated in the new defluorinated product. Phosphorus and calcium guarantees remain the same—17% P, 34.0% minimum 36% maximum Ca and 0.17% fluorine." Check No. 7098 on the coupon and mail it to secure details.

No. 7102—Twines

Three Columbian wrapping twines, manufactured for the buyer who needs small, soft unfinished twines "with unusual strength and excellent yardage," are available from Columbian Rope Co. They are "Columbian" wrapping twine, "Eureka" wrapping twine, and "Regal" wrapping twine. The principal use of these twines is for packaging. Secure details by checking No. 7102 on the coupon and mailing it to Feedstuffs.

No. 7099—Pneumatic Conveyor Systems

A new 16-page technical bulletin, describing and illustrating the applications of pneumatic conveying systems designed for handling dry bulk materials, is now being offered by the Fuller Co. Numbered FK-26A, the bulletin includes 27 photographs showing various stages of operation, including hopper-car unloading stations, rotary valves, portable, stationary and sanitary pumps, loading bulk tanks and batching plants. Secure a copy of the bulletin by checking No. 7099 on the coupon and mailing it.

No. 7100—Folder on Calf, Pig Product

"Market More Pigs" is the title of a new six-page folder describing the uses and benefits of AV-Formula, marketed by Merck & Co., Inc., for use in calves and swine. The folder, printed in blue and black, is now available from Merck. AV-Formula, a combination of penicillin, streptomycin and eight vitamins for use in drinking water, is claimed to keep young pigs on feed even at times of stress. The product is also said to be effective in preventing or reducing bacterial scours in calves or swine. The product is water-dispersible. Check No. 7100 on the coupon and mail it to secure details. Please print or type name and address.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number on the coupon and forwarding it to Feedstuffs.

No. 7029—Corn crusher and feed regulator, Duplex Mill & Manufacturing Co.

No. 7030—Screw conveyor for hammer mills, Sprout, Waldron & Co., Inc.

No. 7038—Automatic bag release for "G-73 Impackers," Richardson Scale Co.

No. 7039—Hydraulic feed unloader, Simonsen Manufacturing Co.

No. 7040—Milk replacer display, Western Condensing Co.

No. 7041—Insect control products, Hilltop Laboratories.

No. 7042—Moisture tester, Seedburo Equipment Co.

No. 7043—Bulk storage in steel tanks, Sapulpa Tank Co.

No. 7044 — Bulk automatic hog feeder, Ranger Equipment Co.

No. 7045—Transportable elevator, Hawkeye Products Corp.

No. 7046 — "Air-cushioned" vibrators, Cleveland Vibrator Co.

No. 7047—Automatic poultry feeder, Keenco.

No. 7048—Bulk feed tanks, Black, Sivalls & Bryson, Inc.

No. 7049—Screw elevator, Fort Worth Steel & Machinery Co.

No. 7050—Trigger unit on gross bagger, Richardson Scale Co.

No. 7051—Tractor for overhead tramrail materials handling systems, Cleveland Tramrail Division, Cleveland Crane & Engineering Co.

No. 7052—Pneumatic vibrator, National Air Vibrator Co.

No. 7053—Crop and crop drying information service, Farm Equipment Division, Lennox Industries.

No. 7054—Dehydrators, Arnold Dryer Division, Heil Co.

No. 7055—Poultry and stock equipment catalog, National Ideal Co.

No. 7056—Grain and seed germination device, Burrows Equipment Co.

No. 7057—Portable dolly bag closer, Minneapolis Sewing Machine Co.

No. 7058—Scroll-type dust collectors, Longhorn Engineering Co.

No. 7059—Mastitis workshop talks, Jensen-Salsbery Laboratories, Inc.

No. 7060—Grain aeration brochure, Monroe Grain Aeration Co.

No. 7061—Bulk feed body brochure, Baughman Manufacturing Co.

No. 7062—Undertrack screw unloader, Andrews Machine Co.

No. 7063 — Vibrator for storage bins, Thayer Scale Co.

No. 7064—Magnetic vibrator feeder, Eriez Manufacturing Co.

No. 7065—Pellet mill die, Sprout, Waldron & Co., Inc.

No. 7066—Booklet on corn uses, Corn Industries Research Foundation, Inc.

No. 7067—6,400-bu. grain bin, Black, Sivalls & Bryson, Inc.

No. 7068—Sewing machine head, Minneapolis Sewing Machine Co.

No. 7069—Plant protein leaflet, Academic Press, Inc.

No. 7070—Combination boxcar door opener and winch hoist, Feedland, Inc.

No. 7071—Enzyme mixture for western barleys, Merck & Co., Inc.

No. 7072—Warehousing cost book, price and other details, Midwest Feed Manufacturers Assn.

No. 7073—Pork program, Ranger Equipment Co.

No. 7074—Fabric cement, Val-A Co.

No. 7075—Research chemicals, Dow Chemical Co.

No. 7076—Antibiotic booklet, Commercial Solvents Corp.

No. 7077—Fly spray, Pratt Laboratories, Inc.

No. 7078—Overhead electric truck hoist, Jacobson Machine Works.

No. 7079—Grain chart changes, Seedburo Equipment Co.

No. 7080—Dealer promotion for pig scours product, Dr. Salsbury's Laboratories.

No. 7081—Grain and seed treater, O K Manufacturing Co.

No. 7082—Feed processing equipment folder, Barnard & Leas Manufacturing Co., Inc.

No. 7083—Screen change attachment, Schutte Pulverizer Co.

No. 7084—Corn crusher, Triumph Division, C. O. Bartlett & Snow Co.

No. 7085—Continuous waterer, Oakes Manufacturing Co., Inc.

No. 7086—Polyethylene film bags, Chippewa Plastics, Inc.

No. 7087—Barley grader, S. Howes Co., Inc.

No. 7088—Bag packer fact folder, H. L. Stoker Co.

No. 7089—Hammer Mill design, Sprout, Waldron & Co., Inc.

No. 7090—Plastic nipple bottle, Albers Milling Co.

No. 7091—Antiseptic, Specifide, Inc.

No. 7092—Grub control chemical, Dow Chemical Co.

No. 7093—Taste "Engineering" service, Taste Engineering, Inc.

No. 7094—Transport mixing wagon, Brower Manufacturing Co.

No. 7095—Vitamin-antibiotic product, Peter Hand Foundation.

No. 7096—Crop drying fan, Chicago Blower Corp.

Send me information on the items marked:

- ☐ No. 7097—Grain Drier
- ☐ No. 7098—Feed Supplement
- ☐ No. 7099—Pneumatic Conveyor
- ☐ No. 7100—Folder
- ☐ No. 7101—Reusable Pail
- ☐ No. 7102—Twines

(PLEASE PRINT OR TYPE)

Others (list numbers) .....

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COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Feedstuffs

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Reader Service Dept. Minneapolis 1, Minn.

John Goetzinger Heads Chicago GEAPS

CHICAGO—John Goetzinger, Norris Grain Co., was elected president of the Chicago chapter of the Grain Elevator and Processing Superintendents for the 1958-59 year.

Lester R. Bailey, Glidden Co., was named first vice president; Oliver Blackinton, Superior Rubber Supply Corp., Clarendon Hills, Ill., second vice president, and Edward A. Roelle, A. E. Staley Mfg. Co., secretary.

Board members are Homer Roberts, Farm Bureau Milling Co., Hammond, Ind.; Ward Peterson, Cargill, Incorporated; Robert Sayre, Gateway Elevator; Harry Press, Pullman Sheet Metal Works; Edwin J. Wallin, Wallin Supply Co., and Dave R. Goodman, Central Bag & Burlap Co., all of Chicago, and Sam E. Anderson, Charles A. Krause Milling Co., Milwaukee.

Poultry Processing Plant to Be Built

SPRINGDALE, ARK. — A poultry processing plant, with a weekly capacity of 200,000 broilers, will be built at Springdale, in the heart of the northwest Arkansas broiler area, officials of Wilson & Co., Chicago, have announced.

The plant will have 50,000 sq. ft. of operating area, and is expected to be in operation early in 1959, the Wilson officials said.

Sharp Increases in Swine Production Indicated in Northwest Barley Area

FARGO, N.D.—The sharpest increase, percentage-wise, in fall farrowings of any state in the U.S. has been indicated by North Dakota hog producers, federal and state reports reveal. Farmers in the state are planning on about a 44% increase in the number of sows farrowing during the fall season which reaches from June through November, compared with a 13% increase for the U.S. as a whole.

In addition the North Dakota spring pig crop was estimated at 608,000, an increase of 11% over the spring of 1957. The average size of the spring litters was at the record high of 7.24 pigs each, compared with the U.S. average of 7.05 pigs.

Pelleted Barley Rations

While the state's total hog production doesn't match major hog producing states as yet, considerable feed industry significance is attached to the North Dakota situation. This is the area where pelleted barley rations got their biggest start and have continued to attract wide interest among farmers. College and industry cooperation in developing this feed supply, coupled with increased barley acreage as a result of wheat acreage restrictions, has resulted in a steady rise in the use of this ration.

North Dakota's increase in fall farrowing represents a pronounced trend in this state where climate and habit normally have dictated spring farrowing, say local spokesmen. The trend toward a more even monthly distribution of farrowings, which was evidenced by even earlier spring farrowings this year, will have its advantages, according to Harry G. Anderson, North Dakota Agricultural College economist. It will tend to reduce the wide seasonal price fluctuations which have prevailed, he says, and promote the much-needed greater stability.

Other Big Increases

Actually, there are several states in the Northwest where barley is important, which are showing a pattern similar to North Dakota's by increasing fall farrowings this year. Montana farmers reported they plan to farrow 27% more sows this fall period than a year ago. Oregon is up 20%, Washington 15%, Idaho is up 30% and Colorado hog producers indicated a 20% increase. South Dakota, already a relatively large hog state, is aiming for a 36% fall increase.

The highest hog prices in four years —up to $26 cwt. at Portland—along with a larger supply of barley in these states, have combined to spur farmers toward increasing farrowings. M. D. Thomas, an Oregon State College economist, points out that Pacific Coast states use much more pork than they produce, which has resulted in the high prices. While he feels the present hog profit boom appears to be on the way out, he says the longer-term outlook is still good for efficient Oregon producers.

Southwest, Too

Still another part of the U.S.—the Southwest—is showing some significant increases in fall farrowing plans, and again a feed grain crop appears to enter into the picture. Texas farmers reported they plan to farrow 30% more sows this fall period, and Oklahoma expects to be up 19%.

Both are states in which there have been large increases in the milo acreage.

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Grain, Feed and Seed Men Like

SEEDBURO *PORTABLE* HYTROL FOLDING CONVEYORS

BECAUSE . . . The Model "R" Hytrol is a lightweight aluminum folding conveyor made for complete portability. You set it where you need it.

MODEL "R"

- Lightweight, yet sturdily constructed
- Ruff-Top belt for longer life
- Loads at floor level
- Reversible at flip of switch
- Adjustable undercarriage, and gravity feeder section, optional
- Sizes—10 to 21 ft.

One man can prop a Model "R" between truck and loft.

A Model "R" can be used in stairways for floor to floor use.

A Model "R" speeds up boxcar-to-truck loading or unloading.

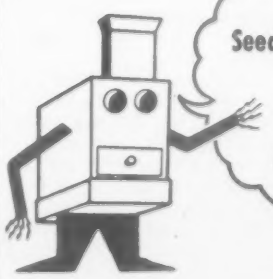
The Model "R" folds in half for relocation or for storage.

The Model "B" Hytrol stacks heavy bags easily and quickly, as pictured. There are no sides to interfere with extra wide boxes or cartons. Users say two men with a Hytrol "B" can do the work of six. Insert picture shows how the Hytrol "B" conveniently folds in half for easy moving and storage.

BECAUSE . . . The Model "B" Hytrol is a heavy-duty folding, portable conveyor of rugged, welded steel construction . . . built for long life!

MODEL "B"

- Handles 150 lb. bags, boxes or cartons
- Elevates hydraulically to 45 degree angle
- Ruff-Top belt, with or without cleats
- Reversible at flip of switch
- Folds in half for easy storage or portability
- Sizes—10 to 22 ft.



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Let's Ruin Another
COB CRUSHER

These little demons would certainly wreak havoc with an ordinary crusher, but *not this one!* It's the revolutionary *NEW* Anderson Cob Crusher proven in actual operation.

- DAMAGE PROOF • NO SHEAR PINS
- NO DOWN TIME • CLOG PROOF
- WEAR RESISTANT • HI CAPACITY
- LOW POWER CONSUMPTION
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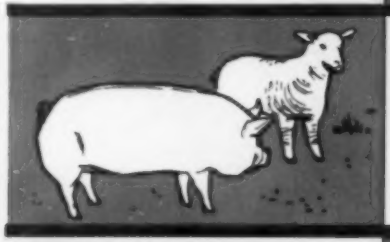
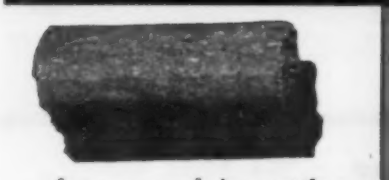


for sheep, hogs, calves



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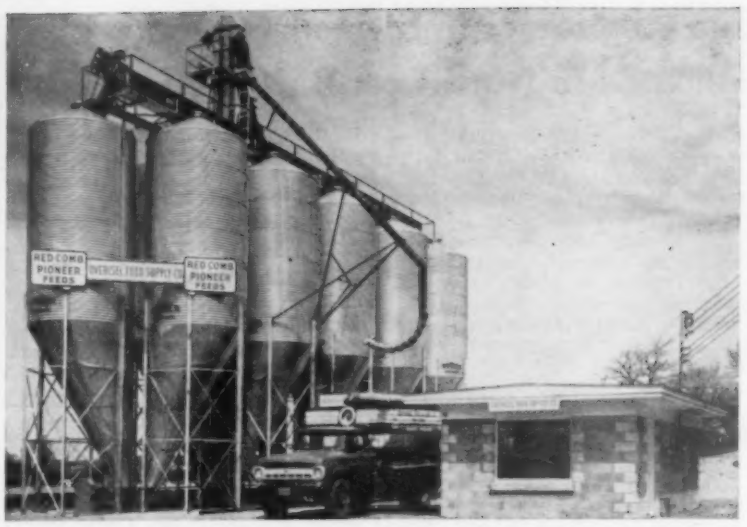


BULK HANDLING—Shown above are the new bulk tanks installed by the Overisel Feed & Supply Co., Holland, Mich. The firm is one of five Red Comb-Pioneer dealers to build bulk plants so far this year. Feed can be unloaded from bulk car to tank and from tank to truck at the rate of 30 tons an hour. The ten tanks each hold 28 tons.

Five Red Comb-Pioneer Feed Dealers Install New Bulk Facilities

CHICAGO — Red Comb - Pioneer Mills, Inc., Chicago, announces that five of its dealers have completed installation of new bulk feed depots so far this year. These, the company said, are the first of a large number of similar bulk installations to be built by Red Comb-Pioneer dealers in 1958.

New bulk depots are now in operation at Holland, Mich.; Norfolk, Va.; Nevada, Ohio; Hilliard, Fla., and Franklin Grove, Ill.

The bulk depots are all of the same basic design; each has special features to best meet the needs of the individual dealer and his customers. All five dealers report that they have been able to give their customers faster service and increase the efficiency of their operations. Seth Foster, Franklin Grove, Ill., says he believes his handling costs will be cut by as much as 50%.

The bulk set-up owned by the Overisel Feed & Supply Co., Holland, Mich., has ten 28-ton Butler Bulk-O-Matic feed tanks. Push-button selection and high-speed conveyors enable this firm to unload feed direct from bulk car to tank and from tank to truck at a rate of up to 30 tons an hour.

The Berkley Feed Corp. plant at Norfolk, Va., also has ten 28-ton bulk tanks. The feed is weighed twice with a hopper scale, as it is unloaded into the plant and before going into bulk trucks for delivery to farms.

Wayside Feed Service at Nevada, Ohio, has eight 28-ton tanks and two 8-ton tanks. The Henry Smith Poultry Farm at Hilliard, Fla., has four 28-ton tanks, and the plant owned by Mr. Foster at Franklin Grove, Ill., has four 24.5-ton Butler Bulk-O-Matic tanks.

Indiana Poultry Group Appoints Field Man

LAFAYETTE, IND. — John N. Howell has accepted a position as field man for the Indiana State Poultry Assn., according to Robert L. Hogue, executive secretary.

Mr. Howell succeeds Jeff Kruse, who is resigning to accept employment with Arbor Acres Farm (Midwest), Thorntown, Ind.

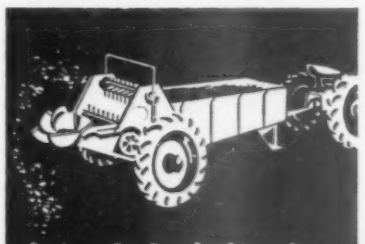
Mr. Howell has served as assistant field manager for the Kentucky Poultry Improvement Assn. for the past two years, helping with field activities, meetings and educational work. In his new job with the Indiana association he will help with inspection work, annual meetings, field program, and will work closely with the various departments, Mr. Hogue said.

2 Veteran Elevator Managers Honored

BREWSTER, MINN.—Two southwestern Minnesota veteran elevator managers who retired in June were honored guests at a buffet dinner and party held here recently.

R. J. Meir, Brewster, who has been associated with the Farmers Elevator of Brewster for 44 years and manager since 1940, and Earl A. Butcher, Bigelow, an employee of the Farmers Elevator at Bigelow for 47 years and manager for the last 15, were the honored guests. Included in the gathering were other elevator managers and employees from the area, salesmen, grain commission representatives and wives.

Vern Lundin, Hubbard Milling Co., Mankato, served as master of ceremonies and presented gifts to the two retiring managers on behalf of the group.



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Laboratory analysis, field tests and commercial use demonstrate the complete safety of TRITHIADOL. Histological studies of chickens fed TRITHIADOL showed normal tissue development. Field tests supervised by university scientists and leading feed manufacturers revealed no evidence of toxicity. And in commercial use in every producing area, in every season, TRITHIADOL mixed with a wide variety of feed ingredients proved effective and completely safe.

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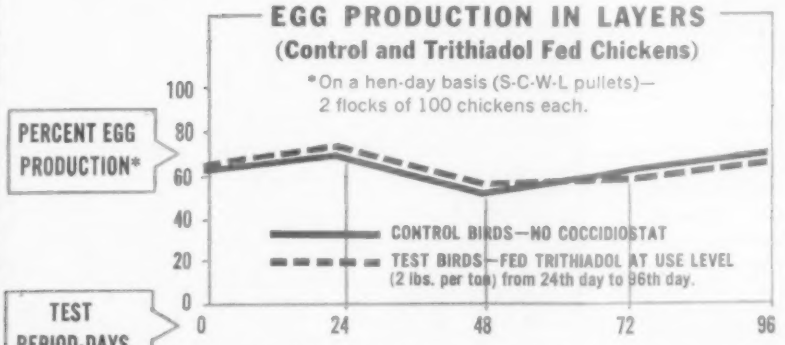

NOTE: TRITHIADOL is recommended for broiler and replacement stock feeding only. Egg production tests conducted solely to determine safety.

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ONLY TRITHIADOL HAS ALL THESE MAJOR ADVANTAGES

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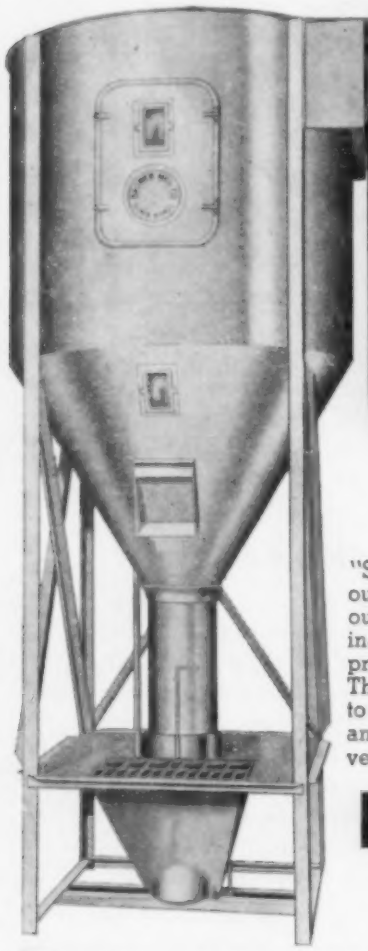
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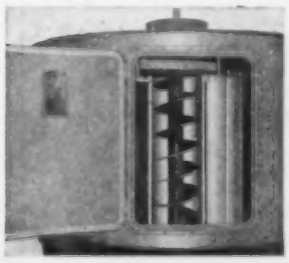
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Kansas Nutritionist Discusses Recent Poultry Studies

MANHATTAN, KANSAS—Reports on various recent poultry nutrition studies were given by Dr. Paul E. Sanford, Kansas State College poultry nutritionist, at a recent poultry field day held here.

The studies were concerned with the use of antibiotics in feeding, shrinkage of turkeys and broilers fed various rations, various lighting experiments with poultry now under way at Kansas State College and feeding increased levels of vitamin A.

The research was summarized as follows:

Role of Carotenoid Pigments and Related Compounds in Poultry Nutrition: Feeding four times the normal amount of vitamin A (8,000 rather than 2,000 I.C.U. per pound of ration) during the stress of summer months has resulted in single-comb White Leghorn hens laying larger eggs, with stronger shells and 38% more eggs. Hens fed this level of vitamin A maintained heavier body weight, had improved feed conversion and lower mortality. Using four times the recommended level of vitamin A increased cost of the feed $2 ton.

Per Cent Shrinkage and Quality of Turkeys and Broilers in Market Channels: Turkeys fed wheat or grain sorghum had less shrinkage during dressing than turkeys fed corn or oats. Broilers fed wheat had the least shrinkage during dressing, followed by corn, barley, grain sorghum and oats.

Comparison of Feeding Animal and Vegetable Proteins for Broilers and Layer-Breeder Hens: A comparison of the performance of laying hens housed in floor pens and laying cages has revealed that more of a response is obtained by supplementing the ration with antibiotics in the case of the floor environment than the cage environment. Supplementation with a combination of five grams of zinc bacitracin and 5 gm. Aureomycin per ton of feed has resulted in higher production, better feed efficiency, better hatchability and lower mortality than no supplement or a single source of Aureomycin, zinc bacitracin, procaine penicillin or Terramycin.

Caged layers fed a 16.5% protein complete ration have given better performance than those fed a combination of grain and 20% protein mash, or those fed a 26 or 32% protein balancer with grain.

In broiler studies it was observed that feeding a corn-soybean oil meal type formula, properly supplemented with dl-methionine, minerals and the necessary vitamins, has resulted in more uniform growth, and in some instances in a better rate of growth, when a combination of two or three antibiotics is used rather than a single source of antibiotic supplement. The 1 lb. per ton of dl-methionine can be replaced by supplementation of the corn-soybean oil meal ration with 4% fish meal; however, use of synthetic methionine is more economical.

Nutrition and Biochemistry of the Quality and Composition of Eggs: Supplementing the laying ration with a combination of zinc bacitracin and Aureomycin has resulted in a better quality egg shell than supplementing the ration with any single source of antibiotics.

Biochemistry and Physiology of Egg Formation: Kansas State College has initiated a study involving the use of "Stimulight," a program under which the period of light is gradually lengthened until the bird has 18 total hours of light out of each 24. A control group is being reared under normal daylight conditions and experimental groups under six hours of artificial light. The various lighting programs will be initiated at the time of sexual maturity. Some chicks are lighted with 15 or 40-watt incandescent bulbs and others with 15 or 40-watt fluorescent tubes. Continuous versus intermittent lighting is also being compared.

Comparison of Feeding Various Kinds, Amounts and Combinations of Antibiotics to Poultry: It has been observed that chicks fed a three-way combination of zinc bacitracin-procaine penicillin-hygromycin weighed more at eight weeks of age than when the same or other antibiotics were fed individually. The average weight of the eight-week-old male and female chicks was 2.7 lb. The feed efficiency was best for the combination of zinc bacitracin-Aureomycin (2.3 lb. feed per pound of gain).

This is the first year Kansas State had fed a combination of antibiotics to laying hens, but to date the combination of 5 gm. zinc bacitracin-5 gm. Aureomycin (10 gm. per ton of feed) looks very favorable. The combination has resulted in better hatchability, improved feed conversion, egg production and lower mortality.

How to vaccinate is the question and Delaware Poultry Laboratories have the answer for you. The wide variety of quality vaccines offered by Delaware Poultry Laboratories and the wide choice of methods of application have made DPL vaccines the choice of an ever increasing number of successful growers. They rely on DPL quality and they know they can find just the right vaccine and the right vaccination method to suit their particular needs. Can we suggest a DPL vaccination program best suited to your needs? The answers below will help us help you. If you have any particular problem, please explain fully. There is no charge or obligation for this free tailor-made service. We are looking forward to hearing from you.

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NBC President States Views on Resolution Of Delmarva Group

RICHMOND, VA.—The president of the National Broiler Council (NBC) has issued a statement regarding a resolution adopted recently by the Delmarva Poultry Industries, Inc., to affiliate with the NBC starting Sept. 1.

The resolution includes some reservations which involve cooperative efforts between the council and the Poultry & Egg National Board. The reason given for the action was to "bring about greater unity, coordination and effectiveness in the promotion of broilers."

Joe Fechtel, Dallas, NBC president, said he is stating his views on the resolution in response to requests from the poultry press. His comments are as follows:

"The officers and directors of Delmarva Poultry Industries, Inc. are to be commended for their unanimous decision to affiliate with the NBC, and for their desire to bring about greater unity and coordination in the promotion of our broiler industry.

"Their request for affiliation is being referred to our board for action. It is also commendable that Delmarva Poultry Industries, Inc. proposes financial support to the NBC on a basis that would be equitable with that now being received from other leading areas.

"The procedure Delmarva Poultry Industries, Inc. outlined for reviewing an affiliation with NBC is sound. In fact, NBC encourages affiliated organizations to make similar reviews from time to time. Also, our own by-laws require the NBC to review periodically the status of our affiliates to determine their eligibility to continue to serve as affiliates.

"In its relationship with affiliates and others, the NBC is willing to work with any organization or group in a manner that will enable our members to get the best value for their dollars. Actually, that's the reason why Dudley-Anderson-Yutzy was selected to handle the NBC's consumer publicity program. And certainly up to now their performance emphasizes this was a wise decision.

"A major guiding principle established by our directors in their recent board meetings is that they must always adhere to the fundamentally sound principle of basing their actions on whatever is best for the broiler industry—to enable this young, dynamic and fast growing industry to take full advantage of the opportunities that lie ahead for those who are putting their faith in its future by being a part of it.

"We are confident leaders from Delmarva Poultry Industries, Inc., along with those from other areas, join our directors in this viewpoint."

CANADIAN CONVENTION SPEAKERS—Several nutrition and other experts addressed the annual convention of the Canadian Feed Manufacturers Assn. at Murray Bay, Quebec. Left to right in the above pictures are Dr. E. W. Crampton, Macdonald College, Quebec, who presided at a symposium; D. M. Smythe, Canada Packers, Ltd., Montreal, chairman of the concluding session; Dr. H. R. Bird, University of Wisconsin, Madison; D. F. Stauffer, Hercules Powder Co., Wilmington, Del.; Dr. J. H. Hare, Chas. Pfizer & Co., Terre Haute, Ind.; W. L. Benson, Merck & Co., Rahway, N.J.; H. H. Hannam, Canadian Federation of Agriculture, Ottawa, and Dr. Camille Bernard, Experiment Station, Lennoxville, Quebec. Wielding the camera was another speaker, Roger Berglund, Feedstuffs, Minneapolis.

Selders Brothers Purchase Flour Mill

KANSAS CITY — Sale of the Waggoner-Gates Milling Co., Independence, Mo., was announced this week by Harry K. Waggoner, president of the 91-year-old flour milling firm. New owners of the firm, effective July 1, are Lewis E. Selders and Eugene L. Selders of Kansas City.

Long identified with the grain and feed industries here, the Selders brothers were formerly associated with Spear Mills, Inc., which was sold in 1950 to the Albers Milling Co., a division of the Carnation Co.

The Selders brothers plan uninterrupted operation of the company.

Established in 1867, the business was founded by Peter Waggoner and his son, William, who were joined in 1878 by George P. Gates and Judge E. P. Gates in forming the Waggoner-Gates Milling Co. It is one of the oldest milling and grain establishments in the Southwest.

The firm discontinued flour milling temporarily in 1953. Long one of the nation's prominent milling firms, the company was most active in soft wheat milling. The idle mill has a daily capacity of 2,550 sacks and grain storage capacity of 350,000 bu.

M. T. Jenkins Joins Worley Mills, Inc.

CLOVIS, N.M. — M. T. (Shorty) Jenkins, formerly of El Paso, Texas, has joined Worley Mills, Inc., Clovis, as sales manager and feed consultant. The company manufactures Okay brand feeds at Clovis and Portales, and merchandises throughout New Mexico and west Texas.

Mr. Jenkins was formerly associated with the El Paso Chamber of Commerce where he was active in organizing and managing the Southwestern Live Stock Show. He also was employed by the Animedic Laboratory, El Paso.

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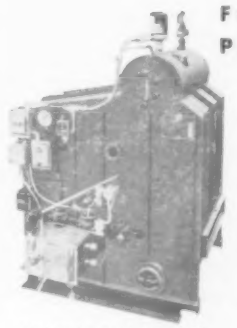

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Iowa Grain Men Form New Group

GREEN MOUNTAIN, IOWA—A new grain association—the Independent Grain Warehouseman's Association of Iowa—has been formed to provide a "strong enough association to have the capital necessary to hire a secretary that could devote his full time to the problems of the trade."

The new association replaces the Independent Grain & Feed Association of Iowa, which was dissolved about three months ago. It is made up primarily of independent grain men licensed as warehousemen of grain within the state of Iowa.

Named to serve the new organization as full time secretary is Russell Lynch, manager of a grain and lumber business in Green Mountain. He has been employed by the firm in several capacities since 1940. In 1952 he took over as manager of the family firm to succeed his father.

Walter Langfitt, Osceola, is president. Other officers are George Potgeter, Steamboat Rock, vice president, and Lee Dietsch, Spirit Lake, treasurer. The association will have 15 directors.

At present, Mr. Lynch is calling on independent grain warehousemen within the state to explain the purposes and objectives of the association and to solicit their membership.

By-laws of the association state that its purposes are to disseminate information to members and the public on the business of warehousing; to provide research and information on tax questions; to acquire information for the guidance of the industry in all phases of warehousing and especially in the warehousing of agricultural products under both government and private storage plans; to cooperate and work with state and national representatives of regulating bodies for the better conduct of the warehousing industry, and to develop and work toward better relations and cooperation between warehousemen and associated and connected occupations in the handling of warehoused products.

Former President of Grain Exchange Dies

MINNEAPOLIS—Charles T. Stevenson, president of the Minneapolis Grain Exchange in 1930-31, died June 25. Mr. Stevenson was 80 years old.

A native of Edinburgh, Scotland, Mr. Stevenson had been a member of the grain exchange since 1900. He operated under the firm name of C. T. Stevenson. He retired from business 10 years ago but kept his membership in the exchange.

Survivors include his widow, Anna, and three daughters, Mrs. John W. Love, Minnetonka Village, Minn., Mrs. George F. Williamson and Mrs. John G. Kinnard, both of Minneapolis.

Speakers Named For Wisconsin Nutrition School

MADISON, WIS.—Isaac S. Riggs, chairman of the board of the American Feed Manufacturers Assn., is one of the speakers scheduled for the annual Nutrition School for Feed Men to be held Aug. 18-19 at the University of Wisconsin.

Mr. Riggs, of the Quaker Oats Co., Chicago, will discuss the role of the feed industry in contract farming as the lead-off speaker for the meeting. The school is sponsored by the University of Wisconsin and the Central Retail Feed Assn., Inc.

Also scheduled for the first day are talks by Dr. Paul H. Phillips, biochemistry department, University of Wisconsin, and J. V. Dougherty, H. H. Van Gordon & Sons, Inc., Black River Falls, Wis. Their topics will be "Free Minds in Free Men" and "How Nutrition Helps Us," respectively.

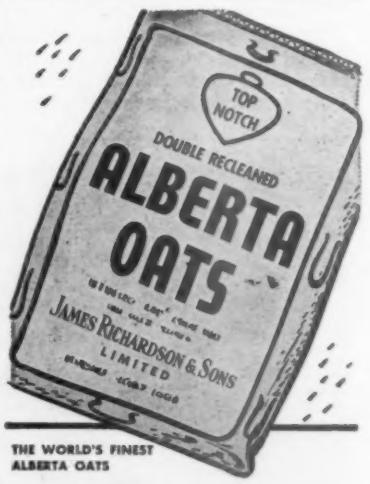
Discussions on minerals for dairy cattle, poultry and meat animals will be presented by Dr. N. N. Allen, University of Wisconsin; Dr. L. C. Norris, Cornell University, and Dr. W. M. Beeson, Purdue University, respectively. A question box period, directed by Dr. W. G. Hoekstra, University of Wisconsin, will close the first day's discussion.

A banquet and program are planned for 6 p.m. Aug. 18, in the Great Hall of the Wisconsin Memorial Union.

Eight staff members of the University of Wisconsin along with a Wisconsin veterinarian will give the morning program Aug. 19. The speakers will talk on the relationship of livestock and poultry management practices to the most efficient utilization of feed. The speakers and their subjects are: Dr. A. L. Pope, sheep; Dr. E. R. Hauser, beef cattle; Dr. H. L. Self, swine; J. B. Hayes, poultry; G. E. Annin, turkeys; Dr. J. W. Crowley, dairy; Dr. C. W. Burch, animal diseases; Dr. A. C. Todd, parasites; Dr. J. R. Curtis, veterinarian at Portage, Wis., poultry diseases.

Dr. W. W. Cravens, McMillen Feed Mills, Decatur, Ind.; Dr. E. E. Bartley, Kansas State College, Manhattan, and Dr. H. R. Bird, University of Wisconsin, will also speak Aug. 19. Their subjects, respectively, are "Producing Feed Safely," "Antibiotics for Dairy Cattle" and "Enzymes in Poultry Feeds."

E. H. Spitzer, Murphy Products Co., Burlington, Wis., will conduct a question box following the program the second day.



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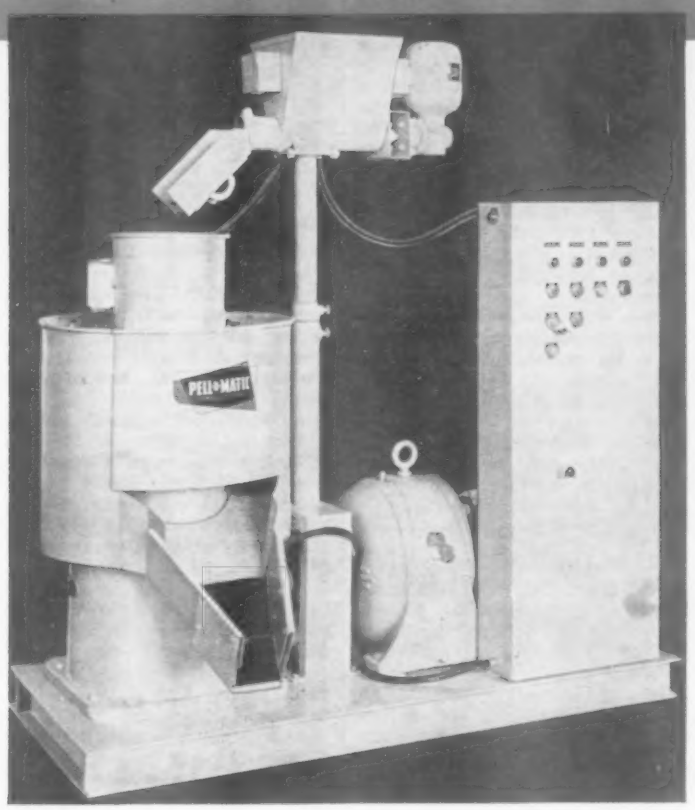

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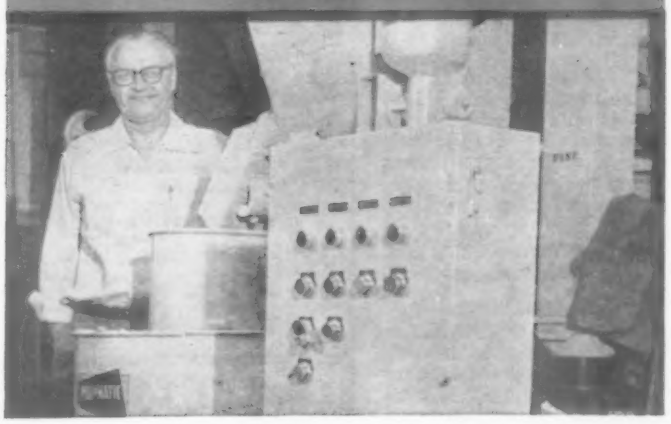

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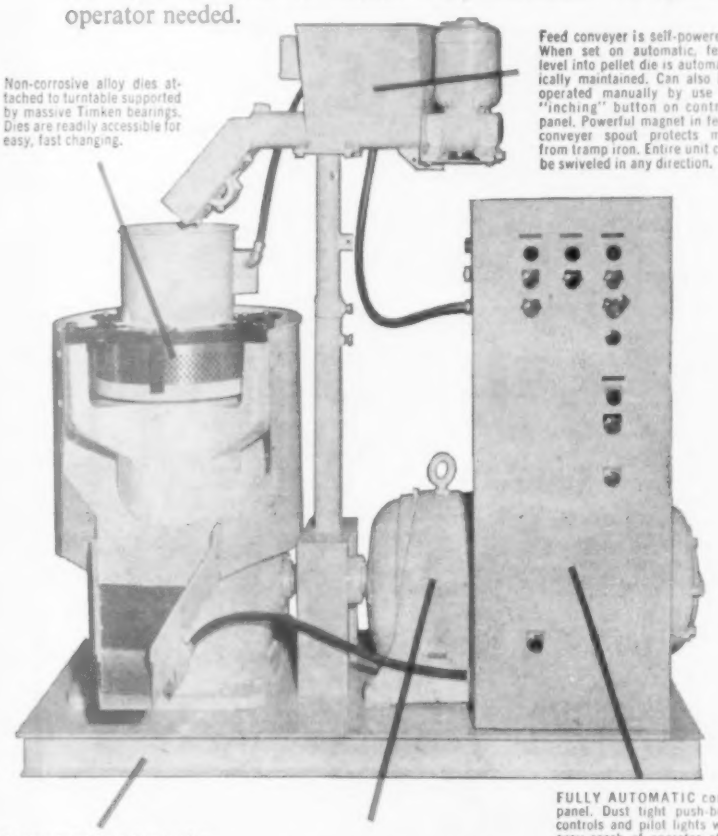

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Report on Millfeed Price Situation Issued By Millers' Group

CHICAGO—The Millers National Federation, national organization of flour millers, recently issued an analysis of the millfeed price situation and made certain suggestions to millers.

The report, while addressed to flour millers, also will be of interest to feed manufacturers. The report follows:

"Within the past couple of days, a sharp advance has taken place in millfeed prices. This is on top of a gradual increase in millfeed prices in most markets since early June. The extent of the bulge varies a good bit from one area to another, but in the case of certain markets middlings are quoted at this writing at more than $10 a ton higher than they were at the low while in other markets bran has moved upward only about a third as much.

"Millers would be well advised to view this development with alarm. There is no greater plague on the milling business than a rising millfeed market at or just before the main booking season. That is true in any year, but it is doubly or trebly the case when the fundamentals in the millfeed situation all added up to pessimism on millfeed prices for the months ahead.

Factors in Picture

"Boiled down, the main factors in the millfeed picture at the present time are these: Vast supplies of livestock feeds of every kind, the totals establishing a new all-time record high by a wide margin. Of a dozen main sources of livestock and poultry feeds, stocks of all but a couple are at the highest point ever known. Flour production (and consequently millfeed production) is running slightly ahead of last year and in fact is at the best level in almost a decade. On the other hand, millfeed usage in poultry feeds, the largest market for that product, has declined tremendously the past two seasons. We saw a report the other day which showed that whereas middlings comprised nearly one-half of broiler feeds three years ago, virtually none of that product is now used in compounding such feeds. There has been a general decline in usage of millfeeds in nearly all kinds of manufactured livestock feeds. No matter how you add these things up, the only reasonable answer is that the prospects ahead for millfeed prices are not rosy even though we may currently be riding a little boom.

"Millers will recall that last year there likewise was a gentle rise in millfeed levels during June and July. What they do not like to recall is that immediately after the main flour booking season was over there was a decline in millfeed prices which lasted from four to six months and which ranged to an extreme of almost $10 per ton in some markets and which averaged fully $6 ton when all areas are taken into consideration. It is almost needless to say that this development was one of the prime factors in making 1957-58 an unsatisfactory milling year, although we hasten to add that it was by no means the only condition which contributed to the year's results.

Daily Computation Suggested

"One of the most constructive things that might happen to the milling business at this time would be for every mill manager to make a computation each morning, which would show the number of tons of millfeed his company owns and the weighted average price at which it was figured in making flour sales. After all is said and done, every time a miller sells flour he, in effect, is buying the millfeed which will result from the milling of that flour. Moreover, he is buying this millfeed for delivery to himself several weeks or even months ahead, and meanwhile having to stand on a large part if not all of this millfeed and watch the market go where it may. Mill managers should share the information developed from their daily millfeed review with their chief aides. Such a course may well help them from avoiding a disaster. Above all, it is important for them not to be lulled into security under conditions which call for extreme caution with respect to the future course of millfeed."

Steady Feed Grain Prices Expected

MANHATTAN, KANSAS—Steady feed grain prices are expected during July, according to agricultural economists at Kansas State College.

Typically, prices of corn and milo reach seasonal high points during the summer months, whereas oats and barley prices have fairly well adjusted to new crop supplies.

Large feed grain supplies continue to overhang the market, thereby limiting price increases to a rather narrow range. White corn prices probably will reach the seasonal peak in July but to obtain a premium over yellow it must be clean and suitable for processing for human consumption.

The total carryout of feed grains is expected to increase 12 to 14 million tons during the current marketing year which ends Sept. 30. The carryin of old-crop grains into the 1958-59 season will approach 62 million tons, according to official U.S. Department of Agriculture estimates. The quantity would be nearly double the 1952-56 average.

A new record carryin of old-crop corn, barley and grain sorghum is expected. Oats carryin is expected to be second largest of record. Clearly, the supply of feed grains is adequate for foreseeable needs. Further price increases appear improbable unless a disaster strikes the growing crop, the report concluded.

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James R. Henderson

REPRESENTATIVE—James R. Henderson of Fargo, N.D., has been named traveling representative for Cargill, Incorporated's grain division, working from the company's Moorhead, Minn., branch office. Mr. Henderson will represent the company in east central North Dakota and northwest Minnesota. A native of Jamestown, N.D., he was formerly employed by the Morgan Farmers Elevator Co. of Morgan, N.D., and the Farmers Elevator Co., Lynchberg, N.D.

Elevator Leasing Bids Accepted at Toledo

TOLEDO—The Toledo-Lucas County Port Authority has voted to accept the two bids it has received for grain elevator development, as soon as it obtains options on the 13½ acres of Middlegrounds land involved.

E. O. Jewell, port general manager, told the board members that he was confident the long-awaited options will be received from the New York Central and Wabash railroads within a week.

The bids, from Continental Grain Co. of Buffalo and The Andersons of Maumee, were opened June 16. They are for leasing of grain elevators which the port authority plans to build on the west side of the Maumee River, just upstream from the Anthony Wayne Bridge.

Since the port authority still does not have the options to purchase the land, the directors could not actually accept the bids. But they did formally declare their intention of accepting the bids as soon as the railroads come through with options.

There is no competition in the bidding. The Andersons wish to lease a 5-million-bushel elevator which the port authority would erect on a six and one half acre site, and Continental's bid is for leasing a 3-million-bushel elevator on an adjacent seven-acre site.

Jerry Baron, chairman of the port authority's grain committee, made a strong plea to the board to take action toward acceptance of the bids. Few persons realize the benefits which can accrue to the port of Toledo from the construction of grain shipping facilities, he said.

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Use of Protein from Potato Starch Effluent Studied in Netherlands

By Special Correspondent

In 1957, a start was made in Holland on the separation of proteins for feed manufacture from effluents of the potato starch industry, and 400 tons of albuminous products were turned out, 300 tons of which were of excellent quality with a 75 or 80% protein content.

Over a million tons of potatoes are processed into potato starch annually in the Netherlands, the starch content of the potatoes being in the region of 20%. The remainder of the potato, which was formerly carried away with the effluents, also contains highly valuable constituents such as proteins, minerals, sugar and vitamins, and in the post-war years the Netherlands potato starch industry has vigorously taken up research into ways and means of regaining these valuable constituents from the effluents. As high-grade proteins are much needed and the supply of animal protein such as fish meal and meat meal is scarce, the processing of vegetable proteins of equal value is considered of great importance.

Feeding tests are claimed to have shown that the protein product obtained from the effluent of the potato starch industry is in no way inferior to animal protein, the main constituents being moisture content 10-12%, crude protein 75-80%, carbohydrates 6-12%, minerals 1.5%, fats 0.5-1.0%. Chemical analyses have shown that this protein contains important essential amino acids in sufficient quantities. It was also said to contain a number of vitamins, including vitamin B_{12}.

Feeding tests on a large scale have been undertaken by the Netherlands Institute for Nutritional Research T.N.O., the experimental station for modern livestock feeding "De Schothorst" and other organizations. These actual feeding tests gave satisfactory results inasmuch as the potato protein proved to be better than soya protein and hardly inferior to animal protein. When, in formula feeds, part of the animal protein was replaced by potato protein, the feeding value was found to increase.

If other vegetable proteins, such as soya, were replaced by potato protein, the adding of antibiotics could achieve the same effect without there being any danger attached, it is reported. The favorable effect of potato flour was, in the tests undertaken, found to be particularly pronounced with very young animals, and its use was given preference in various kinds of meals for young pigs.

As yet only a start has been made on this method of protein separation from potato starch effluents, and research is continuing with a view to processing other valuable constituents from the effluents in order to achieve the greatest possible benefit from the cultivation of manufacturing strains of potatoes.

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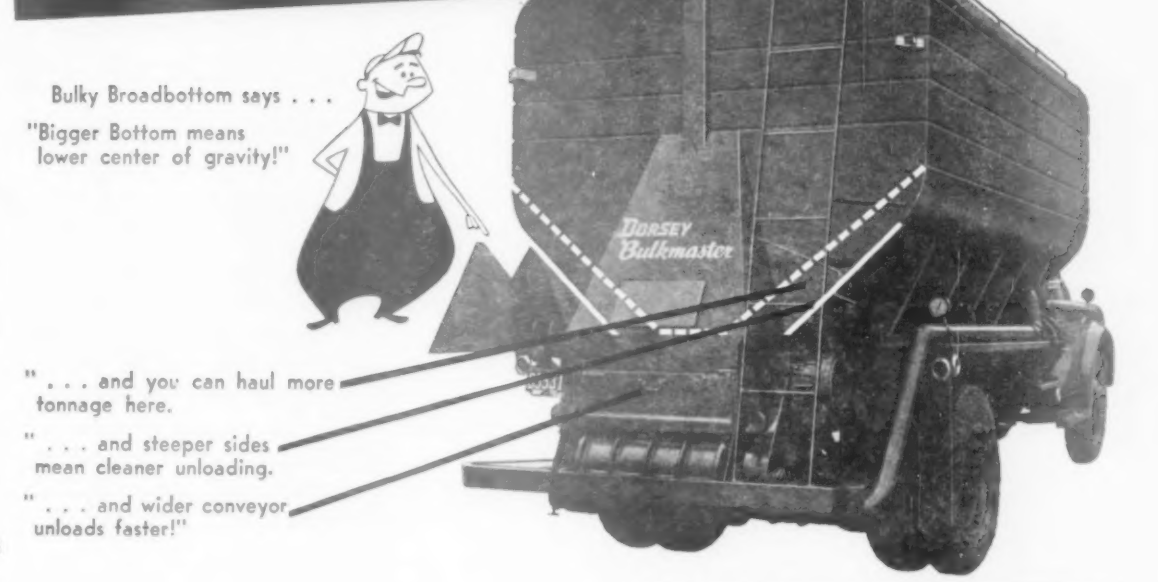
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USDA Announces Wheat Support Price of $1.82

WASHINGTON—The U.S. Department of Agriculture announced July 1 that because of an increase in the wheat parity price, the national average support price to producers for 1958-crop wheat will be $1.82 bu., an increase of 4¢ bu. above the "advance" minimum price for this year's crop announced in April, 1957.

The 1958-crop average support of $1.82 bu. compares to a national average support of $2 bu. for the 1957 crop.

When the minimum price was set in accordance with "forward pricing" provisions of law, the USDA announced that the support price would be redetermined as of July 1, 1958, the beginning of the 1958-crop wheat marketing year, on the basis of the current wheat parity price and the percent level of support as indicated by the relationship of the total supply of wheat available to a determined normal supply for the marketing year.

The July, 1958 wheat parity price of $2.43 per bushel is higher than the estimated parity price of $2.37 bu. used to determine the minimum price in April, 1957, the department announced.

No change is indicated in the 75% level of support announced in April, 1957. This level is determined in a variable range from 75 to 90% of parity on the basis of wheat supply relationships. The total supply of wheat available for the 1958-59 marketing year is now estimated to be 187.9% of the normal supply. The available total supply is considerably above earlier estimates when the total supply was estimated to be 141.8% of the normal supply. Under the law's formula, a wheat supply percentage above 130% calls for the minimum 75% level of support.

At a support level of 75% of parity, the July, 1958 parity price calls for a 1958-crop national average support at 4¢ bu. higher than the minimum support of $1.78 bu. as announced last year.

ROBERT C. HUTH RETIRES

MILWAUKEE, WIS. — The Chas. A. Krause Milling Co., Milwaukee, has announced the retirement of Robert C. Huth, its senior vice president and secretary. Mr. Huth is continuing with the firm as honorary vice president and consultant to the brewery sales division. He was elected secretary and director of the firm in 1934 and vice president in 1950.

Broiler Growers Elect

PORTLAND — Delmer Stutzman, Aurora, was elected president of the Oregon Broiler Growers recently. Delbert Burk, Harrisburg, was elected vice president; Mrs. R. H. Anderson, Creswell, treasurer, and Charles Fischer, Oregon State College poultry marketing specialist, was reelected secretary. New directors are: Cornelius Bateson, Salem, and Jim Ferry, Sherwood, for three year terms; Dick Burdick, Eugene, two years, and Don Norton, Eugene, one year.

Installs Crumblizer

BIG SPRING, TEXAS — Kimbell Feed Mills, Big Spring, has installed a crumblizer mill for the manufacture of poultry feeds, according to Ray Winan, manager. Mr. Winan said feed in crumble form has become very popular with poultry growers of the area. Capacity of the crumblizer will be about four tons per hour. Mr. Winan also announced that the firm has secured several retail dealers in west Texas. He said this will not interfere with the company's direct selling and bulk delivery, however.

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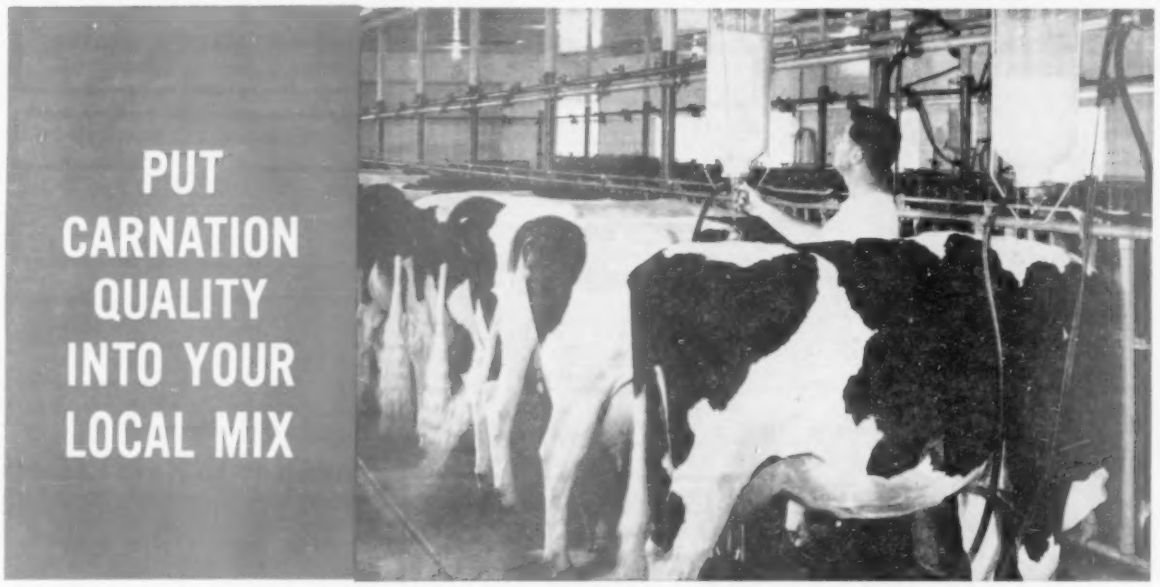

Feeders everywhere know Carnation Farms and the spectacular milk and butterfat records produced by the world-famous Carnation dairy herd. They know too that these records are the direct result of scientific research in the field of animal nutrition and feed formulation coupled with good breeding and management. Albers Lab-Mix was developed at Carnation Farms as part of this scientific research. Lab-Mix now is the "heart" of all Albers Feeds – dairy, poultry, beef, swine. This has enabled Albers feeders, like Carnation Farms, to back up good breeding with the extra nutrition needed to produce record results.

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Classified advertisements received by Tuesday each week will be inserted for the issue of the following Saturday. Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Display advertising accepted for insertion at minimum rate of $10.50 per column inch. All Want Ads cash with order.

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WHIRLAWAY AIRBLAST CAR LOADERS, cast iron pulleys, new and used feed and elevator equipment. Hagan Mill Machinery, P. O. Box 574, Jefferson City, Mo.

FOR SALE—ENCLOSED MOTORS; RICHardson Scales; truck scales; hammermills; oat crimpers; horizontal and upright feed mixers; sewing machines; elevator legs; screw conveyors; molasses mixers and pellet mills. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

FEED MIXER, 1-TON CAPACITY, GUARanteed first-class throughout, 5 H.P. motor drive. Address Ad No. 3879, Feedstuffs, Minneapolis 40, Minn.

PNEUMATIC "AIR-CONVEYOR" SYSTEMS —Positive pressure blowers, new or used. Any size, capacity, distance or product. Nolder Co., Box 14, Corona Del Mar, Cal.

CHAMPION MOBILE GRINDER AND mixer units. Champion Portable Mill Co., 2105 Como Ave., Minneapolis 14, Minn.

USED 12-IN. BULK BODY, $695. GIVE away prices on all types used mill equipment. Seco, Goodlettsville, Tenn.

FOR SALE—ATTRITION MILL, DOUBLE runner 26" Bauer Bros.; has two 30 H.P. 220-V motors direct connected. McLaughlin, Ward & Co., Jackson, Mich.

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MUST SELL AT ONCE — TEN REBUILT Union Spec. complete suspended units, style 14500 head, $200 each; also 15 style 80600-E heads, one conveyor 21800-N, two 60000-D, three new five-foot conveyors. E. C. Covell, 600 E. 37th St., Baltimore 18, Md.; Tuxedo 9-0481.

FOR SALE — NEW AND USED UNION Special, Minneapolis, Fischbein and Wilcox Gibbs Sewing Units, Whizzer Conveyors and bins, Richardson Scales, Mixers, Motors and Mill Equipment. Write Winborns Mill Equipment, Williamsburg, Iowa.

LIQUIDATION SALE — (8) LOUISVILLE Rotary Steam Tube Dryers, 6'x50', 6'x30', 6'x25', also dewatering presses, Davenport No. 1A, No. 2A, No. 3A, Louisville 8-roll 36". Spiral Ribbon Mixers 336, 100, 75, 15 cu. ft. Storage tanks from 1,000 gal. to 20,000 gal., steel, stainless steel, aluminum. Perry, 1403 N. 6th St., Philadelphia 22, Pa.

15-TON PER HOUR CAPACITY USED feed mill machinery including elevators, cold molasses mixing unit, two (1-ton capacity) double ribbon agitator mixers, hammermill, oat crimper, Sprout-Waldron new-type molasses mixing unit for minerals, 18"x36" Eriez grate magnet for floor dump. All in good condition. For further details write Hector Supply Co., Box 1311, Miami, Fla.

CALIFORNIA PELLET MILL — LATE 30 H.P. Master complete with cooler, scalper, new ⅜ die, crumbler if desired, bargain. Also 40 H.P. Standard Cal. Pellet Mill; 150-sack Universal Pellet Cooler complete; near new Eddy Giant Huller Scarifier; two No. 22 Howes Duplex Molasses Mixers; new Anglo American Molasses Mixer, 7½ H.P. motor. All sizes crimpers and flaking mills; 50 and 100 lb. Richardson sack scales. Ross, Inc., 12 N.E. 28th St., Jackson 8-2132, Oklahoma City, Okla.

USED MACHINERY FOR SALE

2½" Molasses Pump with 7½ H.P. open motor	$750.00
Eureka No. 24 Corn Scourer	350.00
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Manlift 80 ft., 12" belt, 20" frame, 5 H.P. open motor, electronic shut off	600.00

Miscellaneous Electrical Equipment

Prices F.O.B. E. St. Louis, Illinois

Address Ad No. 3891, Feedstuffs Minneapolis 40, Minn.

SITUATIONS WANTED

SALES — PREFERABLY INDIANA. B.S. agriculture economics. Five years' farming, 7½ sales and management experience. Address Ad No. 3915, Feedstuffs, Minneapolis 40, Minn.

FIELDMAN AND SALESMAN FOR SMALL feed company or hatchery. Middle age, lots of schooling and experience. Poultry, and turkeys specialty. Go any place. Address Ad No. 3911, Feedstuffs, Minneapolis 40, Minn.

MATURE, QUALIFIED TERRITORY MANager—Twenty years' feed ingredient carload sales, Indiana-Michigan, seeking better opportunity. Good references. Address Ad No. 3888, Feedstuffs, Minneapolis 40, Minn.

SITUATIONS WANTED

EXPERIENCED AND SUCCESSFUL MANager seeks association in multi-plant operation or general manager of large retail feed and grain business. Extensive experience in administration, production, purchasing and sales. Address Ad No. 3876, Feedstuffs, Minneapolis 40, Minn.

PERSONNEL — PRODUCTION, 29 YEARS' experience with one of the largest milling companies. Former mill manager and head of industrial relations. Recently in business for self. Present age 48. Available immediately. Address Ad No. 3874, Feedstuffs, Minneapolis 40, Minn.

FEED ADVERTISING MANAGER WITH thorough knowledge of advertising production and management, sales promotion, sales training, public relations, budget control, etc. Prolific writer, fluent speaker. Background includes sales and sales management. Address Ad No. 3909, Feedstuffs, Minneapolis 40, Minn.

DO YOU NEED PROFIT-MINDED SALES management talent in feed industry? Presently assistant sales manager for international drug house. Thoroughly familiar with profitable sales programs to farmers, feed dealers and feed manufacturers. Animal husbandry graduate. Age 30. I am interested in your offer. Address Ad No. 3902, Feedstuffs, Room 3214, 551 Fifth Ave., New York 17, N. Y.

HELP WANTED

EXCELLENT SIDE-LINE OR FULL TIME item for salesman selling to feed, grain, farm equipment dealers and farmers. Liberal commissions. Replies will be held confidential. Write Doane Agricultural Service, Inc., St. Louis 3, Mo.

SALESMEN WITH KNOWLEDGE OF wholesale feed trade wanted for sale of dried molasses in various areas of United States. Write giving qualifications to: Doane Feed Products Co., P. O. Box 1105, Joplin, Mo.

FEED SALESMAN WANTED FOR NORTHeastern Nebraska and southeastern part of South Dakota. Long established firm. Commission basis with guaranteed income. Earnings limited only by ability. Experience necessary. Furnish character and business references in first letter. Our employees know of this ad. Address Ad No. 3905, Feedstuffs, Minneapolis 40, Minn.

DISTRICT SALESMAN WANTED

Need experienced man calling on feed dealers, hardware and implement stores . . . to sell a product with quick acceptance. National distribution, advertising. Few choice territories open. Good references required. Write, giving experience and sales background. If satisfactory, immediate interview will be arranged. No phone calls.

FARM-LINE MANUFACTURING COMPANY
Hopkins, Missouri

PROCUREMENT MANAGER

Have opening for Procurement Manager on East Coast in large poultry and prepared foods processing plant of nationally known company. Must have technical education and thorough knowledge of poultry industry. Experience in all phases of broiler growing is desirable. All replies will be treated in strict confidence. Send resume. Address Ad No. 3893, Feedstuffs, Minneapolis 40, Minn.

TURKEY SPECIALIST

For sales service work with feeders, dealers and salesmen. Handles management and feeding problems, writes bulletins and speaks frequently before groups.

Must know TURKEYS, turkey diseases and have had practical experience in management and feeding. Live in Decatur, salary, expenses paid, company car, extensive travel.

Please send complete resume to Director of Placement,

A. E. Staley Manufacturing Company
Decatur, Illinois

BUSINESS OPPORTUNITIES

WANTED TO BUY—RETAIL FEED MILL in or near Ohio. Must be in area with good, diversified potential. Address Ad No. 3904, Feedstuffs, Minneapolis 40, Minn.

FOR SALE AT SACRIFICE — COMPLETE modern feed mill and warehouse in western New York. See our Feedstuffs Ad June 14—write for brochure. Pierce & Cash, Inc., Realtors, exclusive agents, 21 Main Street, Hamburg, N. Y.; EM 5680, Attention Jerry O'Keefe.

BIG PROFITS — WAGON JOBBERS, DIStributors, calling on feed dealers, grain elevators, farm supply stores to sell fast selling Speedeo Fabric Cement. Excellent sideline, steady repeats assured. Advise fully. Owosso Chemical Products, Davison, Mich.

Fine Business Opportunities
FEED MILLS and ELEVATORS

We Can Help You When You Want to Buy or Sell Your Business

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MID-WEST BUSINESS EXCHANGE
Halbert C. Smith Plymouth, Ind.

MACHINERY WANTED

WANTED—ELECTRIC TRUCK HOIST FOR unloading grain at elevator. Write: Goode Milling Co., Mangum, Okla.

ALL KINDS OF GOOD USED GRAIN processing machinery. E. H. Beer & Co., Inc., Baltimore 2, Md.

WANTED TO BUY — RICHARDSON scales, bag closing machines and other good mill, feed and elevator equipment. J. E. Hagan Mill Machinery, Jefferson City, Mo.

Feed Additive Studied For Growth Rate Effect

EAST LANSING, MICH.—Feeding broilers low levels of furazolidone, penicillin, arsanilic acid, 3-nitro 4-hydroxy phenylarsonic acid and their combinations in a growth rate and feed efficiency study brought varying results, according to a report in the May issue of the Quarterly Bulletin, publication of the Michigan State University Agricultural Experiment Station.

C. W. Pope and Dr. Philip J. Schaible, poultry husbandry department researchers who made the study, conducted two different experiments in which they added the chemicals to broiler and broiler-finisher rations.

Furazolidone, penicillin, or arsanilic acid fed singly did not always produce a growth response. Furazolidone, in combination with penicillin or with penicillin and "3-nitro," gave significant growth responses as did penicillin and "3-nitro."

Highly significant responses were obtained with "3-nitro" for both sexes, but the combination of furazolidone, penicillin and "3-nitro" was significant for females only. A combination of arsanilic acid and penicillin, with and without furazolidone, increased growth rate in the males, but not in the females.

Feed efficiency was improved quite generally with these chemicals, alone and in combination, over that of the basal rations, but the differences were not statistically significant, the researchers said.

WANTED

Man to run feed mill, must know pelleting and steam rolling equipment. Good salary to a man who is willing to work.
Address Ad No. 3907, Feedstuffs, Minneapolis 40, Minn.

Mutual Millers Name James S. Schonberg Convention Speaker

JAMESTOWN, N.Y. — James S. Schonberg, vice president, Uhlmann Grain Co., will be the featured speaker at the convention of the Mutual Millers & Feed Dealers Assn. here Aug. 12-13.

Author of a daily letter on the grain situation for his company as well as author of a book, "The Grain Trade: How It Works," Mr. Schonberg will talk on the past and present of the grain trade and what is hoped for in the future.

He will appear at 11 a.m. Aug. 13 following a business session.

A complete program of entertainment is also planned for the two days. A golf tournament will be held at the Moon Brook Country Club Aug. 12, and following a 12:30 p.m. luncheon Aug. 13 the members with their entire families are invited to participate in an outing at the Kendall Club. Scheduled are a softball game between "peddlers" and dealers, boat rides and games and "lots of food."

Michigan State Reports On Urea Utilization

EAST LANSING, MICH.—Addition of sulfur to dairy heifer rations containing high amounts of urea improved utilization of the rations in recent Michigan State University tests, but the tests showed that other factors seem to be needed for proper utilization.

Results of the trial were reported in the May issue of the Quarterly Bulletin of the Agricultural Experiment Station at Michigan State University by Dr. C. A. Lassiter and Dr. C. F. Huffman of the dairy department and Dr. R. M. Grimes and C. W. Duncan of the agricultural chemistry department.

Previous work at the station showed that the growth rate of dairy heifers was quite different when they were fed grain rations in which urea supplied 30, 50 or 70% of the total nitrogen. In the most recent trial, sulfur was added.

In the trial, 24 Holstein heifers were divided into three groups and fed grain rations in which urea supplied 30, 50 and 70% of the nitrogen. Enough sulfur was added to the 50 and 70% rations to make all three comparable in sulfur content.

Average daily gain of heifers fed the three rations was 1.40, 1.34 and 1.02 lb. for the 30, 50 and 70% urea rations, respectively. Little difference existed among rations in respect to consumption, but heifers fed the 30 and 50% rations made more efficient gains than those fed the 70% ration. The difference in daily gain between the 30% and 70% rations was significant, and the difference between the 50% and 70% approached significance, the report said.

"Sulfur improved the utilization of rations containing high amounts of urea, but other factors seem to be needed for proper utilization of grain rations in which urea supplies up to 70% of the total nitrogen," the report said.

Montana Firm Names Distributor for Texas

SCOBEY, MONT.—The Martin L. Steger Supply Co., Seguin, Texas, has been named distributor in that state for the Truck Grain Blower Co., Scobey, according to Harold R. Barenz, owner.

The firm manufactures the Montana Grain Blower, which handles grain, mash and pellets.

ADDS BULK INSTALLATION

MORRISON, IOWA—Farmers Elevator & Supply Co., Morrison, has completed a $50,000 installation for handling bulk feed.

Missouri Researchers Find Way to Preserve Silage in Plastic Bags

COLUMBIA, MO.—It may be possible soon for small-scale livestock producers to buy high-quality silage in bagged lots as small as 100 lb. each, according to two University of Missouri agricultural chemists.

Dr. Merle Muhrer and Richard Greenfield announced recently that forage harvested and stored in a tightly-tied plastic bag makes high quality silage that livestock find palatable.

The possibility was discovered this past year while work was being done on a research project in the agricultural chemistry department. Cooperating in the work was the Visking Co., Terre Haute, Ind., supplier of the plastic film used in the project.

The chemists found that silage and grain with a high moisture content can be stored and preserved successfully in bags made of polyethylene plastic film.

The plastic film allows the silage gasses to escape, but keeps air out of the package.

Storage of high-moisture grain and forage crops in the plastic containers offers several advantages, the scientists point out. Besides providing small amounts of silage at a reasonable price for the small-scale livestock producer and the hobby farmer, it can provide the feed industry with a product that is not now available. This, in turn, would give forage producers a market for a product that might otherwise be wasted.

Storage of high-moisture grain is a troublesome problem in many years, and this new development may be a valuable aid in this respect, the scientists said.

In their work, Dr. Muhrer and Mr. Greenfield used plastic tubing 25 in. in diameter cut to various lengths depending on how much silage was to be put into each bag.

After the tubing was cut to the desired length, one end was tied tightly and then filled with silage, packed, and the other end tied tightly. The resulting bag, with both ends tied, doubled back, and tightly retied, was convenient for stacking and handling as handles were formed by the double tying on both ends.

The two chemists noted, however, that anyone who plans to store silage in plastic containers as a result of the new information must take extreme precautions. First, it is extremely important that the ties at both ends of the bag be airtight. It is also important that the plastic isn't punctured during packing or storage, as spoilage would result. If a puncture or tear is found after the silage is in the bag, a strip of pressurized plastic tape should be pressed over the hole to seal it and keep out any additional air.

They said further work is being done in connection with the project on methods of handling, preservatives, best size and kind of bag, nutritive value of silage and high-moisture grain stored in this manner, and feed recommendations.

Integration Discussed By G.L.F. Manager

ITHACA, N.Y.—Members, directors and employees of the Cooperative G.L.F. Exchange were urged recently by E. H. Fallon, general manager, to find ways to reduce the disadvantages of integration to the farmer, and to make the most of its advantages.

Speaking at an institutional conference of G.L.F., Mr. Fallon said, "To do this, we must remain flexible and be ready, willing and able to adapt to new needs and new demands. If we do so, I believe that we can help keep control of this new development in the hands of farmers, to the lasting benefit of members."

Mr. Fallon was quoted in a recent issue of G.L.F. Week, a publication of the cooperative.

Changes in farming bring about changes in cooperatives and G.L.F. "has always moved with the times," Mr. Fallon said. He noted that there is nothing new about the basic idea of integration, but it is now being applied to agriculture in a new way.

The new integration takes in financing and production control; it specifies feed and other supplies to be used; it specifies management practices; and under the new integration, marketing is generally arranged by the integrator.

A few years ago, he said, several members threatened to take their feed business elsewhere if G.L.F. ever came out with a broiler contract. Later, almost the same people stated that if G.L.F. did not come out with a broiler contract, they would take their business elsewhere.

As a result, he said, a very limited and experimental broiler contract was approved by the board of directors of G.L.F. 18 months ago. He said farmers report that the contract has had a favorable effect on the type of contract offered by competition.

If this trend grows, there will be many far-reaching effects on G.L.F., he said.

Holly Sugar Corp. Net Income Drops

NEW YORK—Several adverse factors, including low prices for by-products sold for animal feed, were blamed by Holly Sugar Corp. for a drop in net income during its last fiscal year.

For the year ending March 31, the firm had a net of $1,484,784, compared with $1,910,377 for the previous year. Commenting on the drop in income, Merrill E. Shoup, president, said, "Prices received for by-products declined with those of competing feedstuffs." A strike, poor growing weather and a wet harvest were also blamed.

He pointed out, however, that company livestock feeding operations brought above normal profits, "which offset some of the impact of the unfavorable forces."

Dried pulp production for the firm was equivalent to 2,125,007 cwt., compared to 1,741,074 cwt. for the previous fiscal year, he reported.

IOWA ELEVATOR SOLD

KINGSTON, IOWA — The Meeker Elevator, located at Meeker's Landing on the Mississippi River near Kingston, has been sold to the Des Moines County Farm Service Co. It was purchased from the estate of the late Walter R. Meeker. James A. Shulte has been named manager.

Texas Station Reports On Use of Cottonseed Meal in Swine Rations

COLLEGE STATION, TEXAS — Cottonseed meal can be used safely in complete feed mixtures or in protein supplements for swine, mainly because of new methods available for processing the meal, evaluating its protein quality and determining its gossypol content.

The Texas Agricultural Experiment Station recently published a bulletin on this subject entitled "Use of Cottonseed Meal in Swine Rations."

The report noted that early results from the feeding of cottonseed meal to hogs had indicated that one might never be able to feed it in practical hog rations.

When the complete ration for hogs contains not more than .01% free gossypol, the pigs will make good gains, according to the bulletin. In feeding trials carried out at the station, no pigs have died, nor have any shown the slightest symptoms of cottonseed meal injury when the ration contained .01% or less free gossypol.

The bulletin said that this means cottonseed meals containing .04% or less free gossypol are safe for swine feeding. The rations fed contained liberal amounts of good quality protein.

The protein supplement of swine rations is the principal feedstuff the farmer has to buy, the report pointed out, adding that since cottonseed meal is rich in protein, and since it is a feed available in a wide area at all times, it is important to know more about its use in hog rations.

Copies of the publication, Bulletin 898, are available from the Agricultural Information Office, College Station, Texas.

Miles Anderson Joins ADM at Decatur, Ill.

MINNEAPOLIS—Miles E. Anderson has joined Archer-Daniels-Midland Co., Minneapolis, as a salesman for Archer Booster animal and poultry feeds in the Decatur, Ill., area, it was announced by Robert Pevahouse, sales manager of the feed division's central region.

Mr. Anderson, a native of Viola, Ill., has been engaged in feed sales management work for 12 years. He has been associated with feed firms in Quincy, Decatur and Joliet, Ill. Before joining ADM, he was manager of the feed and merchandise division of Munroe Hatchery, Joliet.

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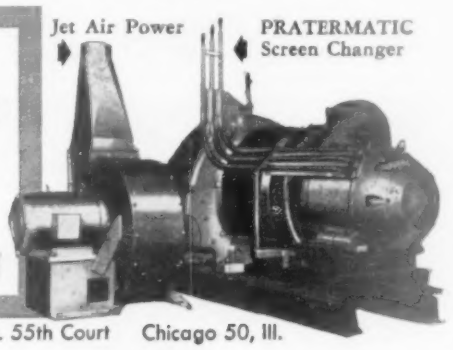

Prater Pulverizer Co. 1537 So. 55th Court Chicago 50, Ill.

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between ground cobs and PAXCO DEHYDRATED CORN COB MEAL is found in PAXCO's uniform high quality, elimination of spoilage worries, constant supply, and stabilized year-'round prices. Write today to

PAXTON PROCESSING CO., INC.
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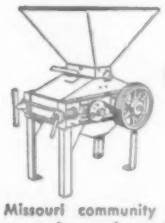
Clears $12.00 hourly From $500 investment



10" x 10" Krimper-Kracker with 3 H.P. motor

Missouri community miller reports investment in modern dust-free grain roller returned so quickly he never missed the money.

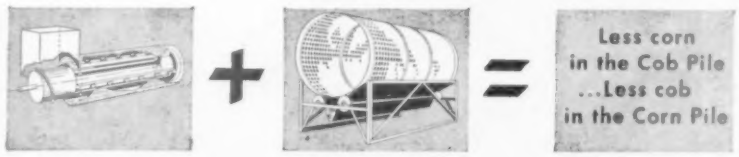
You, too, can jump in and make a killing now! . . . while others sit idly by with outmoded "grinders" and bellyache about conditions.

Write today for catalog on all 15 sizes.

H. C. DAVIS SONS'
Box PN-185, Bonner Springs, Kansas

REVOLUTIONARY NEW SHELLER!

. . . combines a new fast cylinder sheller inside a reel cleaner!



FORDS NEW MODEL 50 Corn Master SHELLER

The design of this Fords Corn Master Sheller eliminates—troublesome shaker screens, eccentrics, etc. Cobs do not go through the fan.

PRODUCES MARKET GRADE CORN RIGHT FROM THE SHELLER

Here's the first really new development in corn shellers in years. Fords Engineers have incorporated a new fast cylinder sheller within a big reel cleaner. The resulting performance puts this sheller in a class by itself.

1. It produces cleaner, market grade corn direct from the sheller—eliminates the need for additional cleaners or cleaning. 2. There is absolute minimum grain loss from breakage or loss into the cob pile. 3. Particularly effective on high moisture corn. If the picker will pick it Fords New Corn Master will shell it! 4. Minimum breakage when shelling pre-dried ear corn. 5. Designed to handle snapped or hand-picked corn.

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MS MYERS-SHERMAN COMPANY • Streator, Illinois

Manufacturers of FORDS Hammermills, Molasses Blenders, Vertical Mixers, Corn Shellers, Pneumatic GrainVeyors, and Portable Processing Equipment.

Only Dr. SALSBURY'S Unique New

UNISTAT

does all this for your chick and growing feeds

- PREVENTS COCCIDIOSIS
- PERMITS IMMUNITY
- STIMULATES GROWTH
- INCREASES FEED EFFICIENCY
- IMPROVES PIGMENTATION

Exacting, controlled tests and conclusive field trials prove it, Dr. Salsbury's exclusive new coccidiostat UNISTAT. . . 3, 5-Dinitrobenzamide combined with Acetyl-(para-nitrophenyl)-sulfanilamide and time-proven 3-Nitro-4-hydroxyphenylarsonic Acid . . . does more than ordinary coccidiostats to help you formulate superior chick and growing feeds.

For UNISTAT is not only highly effective in preventing cecal and intestinal coccidiosis, it permits the development of immunity while significantly stimulating growth, increasing feed efficiency and providing better over-all development *that can be seen in improved pigmentation of shanks and skin.*

UNISTAT is palatable, easy to handle and compatible with all normal feed ingredients.

Meet more of the grower's needs and profit more with feeds containing UNISTAT. Write, wire or phone today for UNISTAT Feed Manufacturer's Guide.

FEED PRODUCTS DIVISION
DR. SALSBURY'S LABORATORIES
Charles City, Iowa

Dr. SALSBURY'S

nation-wide service to the feed industry

TURKEY LAW

(Continued from page 1)

other poultry as little less than loss leaders.

U.S. Department of Agriculture experts here were not available to comment but when the turkey industry introduced this alleged self-help bill —nothing less than a Commodity Credit Corp. surplus commodity holding action in which CCC would backstop a turkey industry surplus—these experts expressed formal USDA opposition.

Informed sources say it is likely that in the closing hours of this session of Congress the Kentucky proponents will find that they have made possibly an interesting tour of the nation's capital, but will obtain little if any consideration as to their legislation.

Information available here to Feedstuffs news sources says that the turkey as well as the other "self-help" measures, such as the milk industry measure, will not make any headway at this final session of the 85th Congress, which is controlled by a Democratic majority in both chambers.

INGREDIENTS

(Continued from page 1)

is 10% less in a bushel of beans than is the yield of 44%."

But, on the other side of the picture, he pointed out that new crop cottonseed is near. More mills are now crushing soybeans, particularly in the South where the cottonseed crushing is curtailed currently. He said the supply of meal should equal demand by mid-August.

The bulk price, Decatur, for Minnesota shipment was $62 July 11, compared with $59 a week earlier. Unrestricted meal was $69 bulk, Decatur, July 11, compared with $66 a week earlier. Traders said recent prices are at a five-year high.

"The whole market is screwy," a broker said. "They're selling Iowa meal into Illinois, as one example."

The U.S. Department of Agriculture, commenting on the situation in its weekly feed market review, said processors haven't been able to keep up with demand despite record crushings. The report said some traders are getting demand from areas never heard from before.

Processors said feed manufacturers have been fighting the rising price trend, but demand for feeds is so strong that they had to buy and now are scurrying to buy ahead and protect themselves. Feed buyers point out that the oil price is low and that meal has had to make the margin for the crushers.

"If feed demand continues, and it should," one processor said, "I can't see anything but strong prices for meal right through September."

While meal was sizzling, however, other feed ingredients held fairly stable. Bleachable fancy tallow went up slightly along with meat and bone meal while tankage and fish meal held about steady.

Wheat millfeeds lost a little strength and corn was down. For the week ending July 9, the U.S. Department of Agriculture reported that the average price of all ingredients was ony 50¢ more than the preceding week.

CHICK INCREASE

(Continued from page 1)

in the same months of 1957. However, in May, the hatch was 23% above the year before, bringing the cumulative production of egg-type chicks to 10% above 1957, the USDA points out.

Broiler chick placements and egg settings in recent weeks have been 25% above 1957, encouraged by slightly higher broiler prices than in 1957. In mid-May, the U.S. average was 20.1¢ lb., compared with 19.3¢ in mid-May, 1957. Slaughter in June was about 16% above 1957, and in May it was 9% up from last year. Higher prices for red meats helped sustain broiler prices.

Dr. Herbert S. Wilgus

JOINS RAY EWING—Heading up the research program of the Ray Ewing Co., Pasadena, Cal., is the new position for Dr. Herbert S. Wilgus, veteran poultry nutritionist who for the past eight years has been vice president and director of research for the Peter Hand Foundation. In a recent announcement (Feedstuffs, July 5), Ray Ewing said Dr. Wilgus has been appointed vice president and research director of his firm and cited his extensive work in formulation of commercial feeds for all types of livestock and poultry. Dr. Wilgus is a Cornell University graduate, served as head of the Colorado State University poultry husbandry department and later as associate director of the Colorado Experiment Station.

Turkey Hatchings

Hatchings of turkeys are now running close to last year, after having run sharply below a year ago for the first four months of 1958. Hatchings through May were 10% below 1957, an amount that cannot be offset by increases in the remaining months of the season.

November and December turkey slaughter, nevertheless, will be quite close to 1957, while production until then will be sharply lower. Mid-May prices to farmers were 3¢ lb. up from the year before — 27.1¢ this year, against 24.2¢ last May. Prices through the holidays are likely to continue above last year.

An unusually late peak in 1958 springtime egg production—May production exceeded both March and April — has resulted in lower egg prices in late May and early June than at any previous time this year. Egg prices, however, were still generally about 5¢ doz. above the year before. In mid-May, before prices had declined fully, the U. S. average price received by farmers was 35.5¢ doz., almost 7¢ above 1957.

During coming weeks, egg production will decline seasonally, and prices are likely to rise. In past years, the summertime rise has been greatest for high-quality large eggs, because their supply declines by a larger percentage than total egg production.

With the replacement hatch up this year from last, prices for pullet and medium size eggs in the fall may show a wider differential from large egg prices than last year. Prices for small eggs were quite close to the price for large ones in the late summer and fall of 1957. In that year, 18% fewer chickens were raised for replacement.

CROP REPORT

(Continued from page 1)

sizeable reduction in sorghum grain below last year's record crop. Hay tonnage will rank well below but second only to last year's record, ample for demands and well distributed. Forage growth continued generally favorable during June and most sections have good to excellent grazing. Livestock conditions generally remain excellent with little drouth pressure to disturb marketings.

Taking the estimates of production as well as stocks on farms, as contained in the report:

CORN: The 1958 corn crop is forecast at 3.3 billion bushels, 3% below last year but 5% above average. The yield, indicated at 45.2 bu. per harvested acre, is somewhat below the record 46.8 last year but far above the 38.8-bu. average. Growing conditions during most of June were not generally favorable for corn.

The acreage planted to corn for all purposes is estimated at 74.4 million acres, 0.5 million above last year but 8.4 million below average. About 6.7 million acres of corn were placed in the Acreage Reserve or 1.5 million less than last year.

In the Corn Belt, production is forecast at 2.6 billion bushels or 5% below last year. The indicated yields per acre are below the high yields last year in all states except Ohio and Kansas.

The estimated 1,026 million bushels of corn on farms July 1, third highest of record, were 9% below the 1,123 million bushels on farms a year earlier but 18% above average. As of May 15, there were 410 million bushels under Commodity Credit Corp. farm loan including reseal and purchase agreement as compared with 537 million bushels the same date a year earlier.

OATS: The 1958 oats crop is expected to total 1,255 million bushels —4% below last year and 3% below average following a sharp reduction in acreage. The yield of 39.3 bu. now in prospect is nearly 2 bu. above last year's yield and sets a new record for the nation. Yields are expected to turn out much better than last year for the East North Central, South Atlantic and South Central regions, while prospects are down slightly for the other regions.

Farmers plan to harvest 31.9 million acres of oats for grain in 1958—9% below last year, 15% below average and the smallest acreage for grain since 1934. The important west north central states still account for a little more than about one half of the oats acreage for grain although acreage for harvest this year is 9% below a year earlier and 20% below average. The sharpest reduction for this group occurred in Iowa, Kansas and Missouri. Acreage for harvest is also down rather sharply in some of the south central and south Atlantic states where unfavorable weather interfered with planting.

Stocks of old crop oats on farms on July 1 are estimated at 275 million bushels—42% more than a year earlier and 21% more than average. Stocks were larger than a year earlier in all regions except the south Atlantic states where relatively few oats are stored on farms.

BARLEY: July 1 conditions indicate a 1958 barley crop of 423 million bushels, 3% below the 1957 record crop of 436 million bushels. The 1947-56 average production is 303 million bushels. A slightly smaller acreage for harvest in 1958 and a lower prospective yield account for the indicated decline from 1957. Approximately 45% of the nation's 1958 crop is in three states: North Dakota, California and Montana, while Washington, Oregon, Minnesota, Kansas, Idaho, Colorado and South Dakota account for an additional 34% of the crop.

Barley for harvest as grain is estimated at 14.9 million acres for the U.S., about the same as in 1957 but 34% above average. Abandonment and non-grain uses are indicated at 8% of the total seeded acreage, which compares with 9% last year and the average of 11%.

Farm stocks of old barley July 1, estimated at 62.5 million bushels, were the highest since 1943, 48% larger than last year and 69% above average. This large carryover reflects the record high production of 1957. Stocks of barley on Montana farms of 16.9 million bushels were more than double those of a year earlier and were nearly 3½ times average.

SOYBEANS: Another record acreage of soybeans is in prospect, thus maintaining the upward trend that has continued for nine consecutive years. Soybeans planted alone for all purposes are estimated at 24.4 million acres. This is 12% above the previous record of 21.8 million acres planted last year although less than 2% above the March 1 intended acreage.

Soybeans in farm storages on July 1 are estimated at 26.5 million bushels. This is nearly 10 million bushels less than on July 1 a year ago but still the third highest of record for the date. The 10-year average for July 1 is only 10.8 million bushels.

Disappearance from farms of about 90 million bushels from April 1 to July 1 was the highest of record for the period and compares with about 78 million bushels for the same period in 1957. The previous high disappearance was almost 81 million bushels for the same period in 1955.

ALL SORGHUMS: The acreage planted and to be planted to sorghums for all purposes in 1958 is estimated at 21,698,000 acres—20% below the record high acreage in 1957 but 36% above average. The decline in sorghum acreage was largely confined to the Great Plains states where there was a sharp increase in wheat seeded for 1958 harvest, most of which will be harvested. The acreage to be harvested for all purposes this year is indicated at 20.5 million acres compared with 25.7 million last year and the average of 14.3 million.

Stocks of sorghum grain remaining on farms on July 1 this year totaled 28.1 million bushels, largest for the date in the 3 years of record, but represented only 5% of last year's "bin-buster" crop.

CROP COMMENT

(Continued from page 1)

less than develop a cardiac condition in feed grain market bulls.

Reading into the USDA production estimates for new crop corn is the connotation of farm-held stocks for the old crop.

USDA says that farm-held stocks of old crop corn (1957) amounted to approximately more than a billion bushels on July 1, 1958, of which 410 million bushels were under the USDA loan program as of May 15. The USDA figure of stocks under loan as of May 15 includes seal and purchase agreement corn.

Corn disappearance for the April-June quarter, according to USDA has amounted to 647 million bushels as compared with 498 million last year.

It all adds up to an equation showing some of substantially larger quantities of corn held at the farm level. This is without loan protection and available sometime in the market place if it grades for quality, particularly if the new corn crop comes through as now indicated in the USDA report for July 1.

USDA officials are stunned by the crop outturn reports. They agree that their latest estimates, that there will be as much as 400 million bushels of free market corn held outside loan coverage at the close of this crop year, are an accurate estimate on the basis of this crop report and that for storage stocks on farms of corn as of July 1.

THE FEED MARKETS

★ ★ ★ ★

Demand — Supply — Trends — Prices

Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

A AND D FEEDING OIL

Boston: Demand light; supply good; 600 D, 1,500 A 18¢ lb.; 300 D, 2,250 A 18½¢ lb.; 300 D, 1,500 A 17¢ lb.; 300 D, 750 A 15½¢ lb.

New York: Trend steady; price per lb. in 55-gal. drums (413 to 420 lb.) 300 ICU, 750 A 13½@15½¢, 1,500 A 15½@17¢, 2,250 A 17½@20¢, 3,000 A 19½@21¢; 600 ICU, 1,500 A 16@18¢, 2,250 A 18@19½¢, 3,000 A 20@21¢; f.o.b. Massachusetts, New York or Pennsylvania.

Seattle: Demand slow; trend steady; supply good; 300 D, 2,250 A 22¢ lb., 300 D, 1,500 A 19¢ lb., 300 D, 750 A 17¢ lb., all ex-warehouse, drums included.

Minneapolis: 10,000 A 35¢ lb.; 300 D, 2,250 A 21½¢ lb.; 300 D, 1,500 A 20½¢ lb.; 300 D, 75 A 18½¢ lb.

Chicago: Demand fair; supply adequate; straight A feeding oil with 10,000 units vitamin A per gram 7½@8½¢ a million units of vitamin A, l.c.l., packed in 55 gal. drums, f.o.b. Chicago, drums included.

ALFALFA MEAL

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $46.20@47.20.

Philadelphia: Demand dull; trend unsettled; supply fair; new 17% dehydrated $53, nominal.

Kansas City: Demand good; trend steady; supply adequate, although offerings are not heavy, supplies of top quality material are limited; dehydrated alfalfa meal with 17% protein and 100,000 units vitamin A guaranteed on arrival $35@37, sacked; 17% 100,000 reground pellets $37@39, sacked; 17% 100,000 pellets $31@33, bulk; 18% protein 125,000 A meal $41@42, sacked; suncured alfalfa, demand is poor with new crop supplies adequate for demand, No. 1 fine ground 13% protein $33.50@35, No. 1 ¼-in. $31.50@33, No. 2 ¼-in. $30@31, sacked.

Boston: Demand and supply spotty; dehydrated, 17% $53, nominal; suncured, 13% $46, nominal.

Memphis: Demand poor; trend steady; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $42.

Seattle: Demand fair; trend firmer; supply good; 15% protein suncured $42, delivered, truck loads; 136,000 A unit dehydrated $68, delivered, truck loads.

Omaha: Demand fair; supply ample; 17%, 100,000 A units, bulk pellets $32, Omaha basis; 17%, 100,000 A sacked meal $36, Omaha basis.

Los Angeles: Demand limited; trend weaker; supply increased; dehydrated pellet meal, 17% protein, 100,000 A $50@51; dehydrated meal, 17% protein, 100,000 A $48@49; suncured crumbles, 15% protein $44@46; suncured meal, 15% protein $42@44.

St. Louis: Demand slow; trend lower; supply ample; 13% fine suncured $40; dehydrated, 17%, 100,000 units A $41.25.

New Orleans: Demand fair; trend steady; supply ample; 17% dehydrated, vitamin A guaranteed $46@46.50; pellets $44.50@45.

Buffalo: Demand poor; trend steady; supply adequate; $55, sacked, Boston.

Portland: Demand slow; supply ample; trend unchanged; suncured $36; dehydrated $50.

Chicago: Demand fair; supply adequate; 17% dehydrated, with 100,000 units vitamin A guaranteed $41.50@42.

Ft. Worth: Demand fair on dehydrated, slow on suncured; supply sufficient; new crop, 17% protein, Texas dehydrated $40, f.o.b. plants, central Texas; Kansas dehydrated, 17%, 100,000 A $46.05@47.05 rail; suncured No. 1 13% protein ¼-in. grind, truck $37.

Minneapolis: Steady trend; better demand; ample supplies; 17%, 100,000 units vitamin A, reground pellets $45; meal $42.50; granules and oil treated, bulk $42.50.

ANIMAL FAT (STABILIZED)

San Francisco: Demand fair; supply ample; bleachable fancy 8¾¢ lb.; yellow grease 7¾¢ lb.

Kansas City: Demand fair to good; trend steady; supply adequate; bleachable fancy tallow 7¾@7¾¢ lb., tank car.

New Orleans: Demand good; trend steady; supply moderate; 7¾@8¢ lb., tank cars.

Louisville: Demand good; trend strong; supply fair; bleachable white 8¢ lb.; white tallow 8¼¢ lb.; yellow grease 6¾¢ lb.

Chicago: Demand good; supply short; bleachable fancy tallow, tank truck or carlots 7¾¢ lb.; yellow grease 7¼¢ lb.

Ft. Worth: Demand good; supply light; prime tallow, tank cars 8¢ lb.; drums 9½¢ lb., f.o.b. north Texas packing plants with returnable drums.

St. Paul: Broader demand in both export and domestic markets combined with continued tight supplies to raise the price to 7¾¢ lb., f.o.b. producers' plants for bleachable fancy tallow.

BARLEY FEED

Philadelphia: Demand dull; supply fair; pulverized $44.50.

Boston: Demand slow; supply light; $45.

Seattle: Demand fair; trend steady; supply good; $45, bulk, delivered, truck lots (new crop).

San Francisco: Demand fair; supply ample; rolled $59; ground $58.

Ogden: Supply normal; rolled $41@45; whole barley $34@39.

Los Angeles: Demand steady; trend unchanged; supply ample; standard rolled $3 cwt., sacked; standard ground $3 cwt., sacked.

Milwaukee: Demand good; supply fair; needles 92¢@$1.10 cwt., ground screenings $27.50, sacked, Milwaukee.

New Orleans: Demand slow; trend steady to easier; supply light; $63@65.

Portland: Demand slow; supply ample; trend unchanged; rolled $58, ground $56.

Baltimore: Demand good; supply light; $48.

Chicago: Demand good; supply light; $37.

BENTONITE (SODIUM)

Cincinnati: Demand steady; supply adequate; f.o.b. Cincinnati, minimum 30-ton carlots: 80 granular $30.21; 200 mesh fine $29.96.

Chicago: Demand steady; supply adequate; f.o.b. Wyoming and South Dakota shipping points; granular 30 mesh $16.50; fine granular, 80 to 100 mesh $13.75; powder, 200 mesh $13.50; f.o.b. Belle Fourche, S.D., minimum 30-ton carlots; 80 granular $13.50 net; 200 mesh fine $13.25 net.

BLOOD FLOUR

Louisville: Demand good; trend very strong; supply light; $112.50@117.50.

BLOOD MEAL

Ogden: Supply normal; $115 in 100-lb. bags, f.o.b. Ogden.

Los Angeles: Demand moderate; trend stronger; supply light; $7.50 a unit of ammonia.

San Francisco: Demand good; supply tight; $7.25 a unit of ammonia.

Louisville: Demand good; trend strong; supply light; $112.50@117.50.

Portland: Demand good; supply ample; trend unchanged; $120.

Chicago: Demand fair; supply tight; $130@135, guaranteed 80% protein.

New Orleans: Demand fair; trend steady; supply ample; $108@113.

BONE MEAL (STEAMED)

Los Angeles: Demand fair; trend steady; supply adequate; imported $66.50 in 20-ton lots.

San Francisco: Demand good; supply ample; $75.

Cincinnati: Demand fair; trend steady; supply short; $100, sacked, f.o.b. Cincinnati.

Boston: Demand and supply steady; $88.

Seattle: Demand and trend steady; supply good; $85, ex-dock, truck lots.

Louisville: Demand fair; trend strong; supply ample; $90@95.

Portland: Demand good; supply ample; trend unchanged; $95.

Chicago: Demand fair; supply tight; $80.

Buffalo: Demand good; trend steady; supply ample; $90.

Ft. Worth: Demand fair; supply adequate; $85, sacked, f.o.b. Ft. Worth, local manufacture.

New Orleans: Demand fair; trend steady; supply normal; $86@87.

BREWERS DRIED GRAINS

Philadelphia: Demand slow; trend unsettled; supply light; $56.

Cincinnati: Demand poor; trend steady; supply adequate; $50.

Boston: Demand fair; supply adequate; 26% $54.25; 22% $53.

San Francisco: Demand fair; supply ample; $54.

St. Louis: Demand slow; trend lower; supply ample; $44.

Milwaukee: Demand good; supply fair; $44.50.

Los Angeles: Demand and trend steady; supply limited; $49 bulk, $53 sacked.

New Orleans: Demand fair; trend steady; supply fair; carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11¼¢ lb.

Louisville: Demand good; trend stronger; supply fair; $46@47; strong due to shortage of distillers grains and good mixer market in the South.

Chicago: Demand fair; supply adequate; 26% $44.50.

Buffalo: Demand and supply fair; trend steady; $48, bulk, Boston.

Ft. Worth: Demand fair; supply moderate; 26% $49.65.

BREWERS DRIED YEAST

Los Angeles: Demand and trend steady; supply limited; 10¢ lb. in 5-ton lots; 11¢ lb. in less than 5-ton lots.

San Francisco: Demand fair; supply good; 10¢ lb.

Omaha: 11¢ lb.

Boston: Demand and supply steady; 10¢ lb.

Seattle: Demand slow; trend steady; supply ample; $12 cwt.

Louisville: Demand fair; trend steady; supply good; 10@10½¢ lb.

Buffalo: Demand and trend steady; supply ample; $9.75 cwt.

Portland: Demand good; supply ample; trend unchanged; 8½¢ lb.

Chicago: Demand good; supply limited; 10@11½¢ lb. in carlots; 10½@12½¢ lb., l.c.l.

St. Louis: Demand good; supply limited; 10¢ lb. in carlots; 11¢ lb. in ton lots; 12¢ lb. in less than ton lots.

Cincinnati: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

Pittsburgh: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New Orleans: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New York: Carlots 9½¢ lb.; 10-ton lots 10¢ lb.; 5-ton lots 10½¢ lb.; ton lots 11¢ lb., f.o.b. New Jersey.

Milwaukee: Demand good; supply limited; 10½@11½¢ lb. in carlots; 10¾@12½¢ lb., l.c.l.

BUTTERMILK-CONDENSED

Ogden: Supply normal; $4.40, 100-lb. drum.

Philadelphia: Demand slow; supply light; $4.25 cwt.

San Francisco: Demand fair; supply good; $5 cwt.

Los Angeles: Demand fair; trend unchanged; supply adequate; $5.25 cwt. in 100-lb. lots; $4.25 cwt. in 500-lb. lots.

Boston: Demand slow; supply light; 3½¢ lb.

Wichita: Demand good; supply insufficient; $2.75, 100-lb. barrel.

Chicago: Demand slow; supply adequate; $3.25@3.50 cwt. in carlots.

New Orleans: Demand dull; trend steady; supply ample; $4@4.25 cwt.

Louisville: Demand slow; trend steady; supply normal; $4.25 cwt.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight and tax)

New York: Crystals $15.30, flour $10.30.
Buffalo: Crystals $16.16, flour $11.16.
Toledo: Crystals $18.06, flour $13.06.
Boston: Crystals $16.69, flour $11.69.
Limecrest, N.J.: Crystals $10.50, flour $5.50.

CALCIUM CARBONATE

Cincinnati: Demand fair; trend steady; supply adequate; $8@9 cwt.

Los Angeles: Demand good; trend steady; supply adequate; $10.25.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, truck lots.

Chicago: Demand steady; supply adequate; fine grind, plain $9.67; bulk, in hopper cars, fine grind $7.67; bulk, in boxcars $8.17; granular grind $1 premium.

Minneapolis: Fine grind, 50-lb. bag $12.25, 100-lb. bag $11.50; bulk, boxcar $10; bulk, hopper $9.50; coarse grind $1 premium, delivered Minneapolis.

CHARCOAL

San Francisco: Demand steady; supply ample; $141.

Cincinnati: Demand good; trend steady; supply adequate; briquets $120, 25-lb. bags, f.o.b. Cincinnati, warehouse.

Los Angeles: Demand steady; trend unchanged; supply ample; hardwood poultry; $156 sacked in less than ton lots; $144.50 sacked in ton lots.

Boston: Demand and supply light; $100.

Chicago: Demand quiet; supply adequate; poultry charcoal $106 in 50-lb. multiwalls.

COCONUT MEAL

Los Angeles: Demand limited; trend firm; moderate offerings; copra cake $64@66.

San Francisco: Demand fair; supply ample; solvent $53; expeller $62.

Seattle: Demand and trend steady; supply limited; $68, truck lots (Canadian).

Portland: Demand good; trend higher; supply limited; $65.

COD LIVER OIL (FORTIFIED)

Boston: Demand fair; supply good; f.o.b. New York, 600 D, 2,250 A 21¢ lb.; 300 D, 2,250 A 20¢ lb.; 300 D, 1,500 A 17½¢ lb.

New York: Trend steady; price per lb. in 55-gal. drums (413 to 420 lb.) 300 ICU, 750 A 14½@15½¢, 1,500 A 16½@20¢, 2,250 A 18½@21¢, 3,000 A 21½@23¢; 600 ICU, 1,500 A 17½@19½¢, 2,250 A 20@22¢, 3,000 A 22@23¢; f.o.b. Massachusetts, New York or Pennsylvania.

CONDENSED FISH SOLUBLES

Los Angeles: Demand and trend steady; supply limited; $5@5.25 lb.

New York: Demand and supply fair; trend steady; 4¼@4¾¢ lb., f.o.b. eastern shore.

Boston: Demand good; supply short; 5¢ lb., nominal.

New Orleans: Demand light; trend slow; supply limited; $92@95, f.o.b. Gulf.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis, bulk basis $5 less)

Minneapolis: Feed $47.80, meal $86.80.
Atlanta: Feed $53.98, meal $92.98.
Birmingham: Feed $52.64, meal $91.64.
Boston: Feed $52.84, meal $91.84.
Chicago: Feed $41, meal $80.
Cleveland: Feed $49.14, meal $88.14.
Denver: Feed $51.51, meal $90.51.
Ft. Worth: Feed $49.96, meal $88.96.
Indianapolis: Feed $46.36, meal $85.36.
Kansas City: Feed $41, meal $80.
Louisville: Feed $48.21, meal $87.21.
New Orleans: Feed $51.20, meal $90.20.
New York: Feed $52.43, meal $91.43.
Norfolk: Feed $51.71, meal $90.71.
Philadelphia: Feed $52.02, meal $91.02.
Pittsburgh: Feed $49.96, meal $88.96.
St. Louis: Feed $41, meal $80.

CORN OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $50.18.

Louisville: Demand dull; trend weak; supply light; $50.68, off $9 ton.

COTTONSEED OIL MEAL

Cincinnati: Demand poor; trend steady to higher; supply adequate; solvent $74; old process $75.50.

Philadelphia: Demand slow; trend unsettled; supply light; $84.

Boston: Demand fair; supply adequate; $83.

Wichita: Demand slow; supply ample; 41% old process $62.

Kansas City: Demand fair; trend steady; supply tightening up as old crop cottonseed dwindles but new crop will be available by Aug. 1 in Texas; old process meal $68.50@71, delivered, sacked, Kansas City from west Texas; solvent meal $64@65, delivered, Kansas City.

Memphis: Demand light; trend steady; supply scarce; prime 41% protein, old process $65.50, sacked; new process, 41% solvent $64, sacked.

Seattle: Demand and supply fair; trend strong; 41% expeller process $69, delivered, truck lots.

San Francisco: Demand good; supply ample; expeller $54; solvent $62.

Omaha: Demand good; supply ample; 41% solvent $67.50, sacked, delivered Omaha basis.

Los Angeles: Demand limited; trend steady; supply ample; local production, 40% protein $55.

Ogden: Supply average; 41% $65@70.

Atlanta: Demand good; trend strong; supply limited; 41% $76, sacked, immediate.

St. Louis: Demand slow; trend steady; supply limited; $68.25.

Louisville: Demand slow; trend strong; supply normal; old process $75; new process $73.50.

New Orleans: Demand slow; trend steady; supply adequate; $79@80.

Chicago: Demand fair; supply tight; hydraulic $77@77.50; solvent $74.50@75.

Portland: Demand good; supply ample; trend higher; $65.

Buffalo: Demand fair; trend steady to higher; supply adequate; $85 sacked, Boston.

Ft. Worth: Demand improved for cottonseed meal, but nil for hulls; limited offerings old process, sufficient on solvent; carlots, 41% old process $60@62, f.o.b. central Texas; solvent 41% low gossypol $59.80, delivered Ft. Worth; pellets $2 additional; cottonseed hulls $19.50@22, delivered Ft. Worth.

CURACAO PHOSPHATE

New York: Trend steady; ground Curacao phosphate in 100-lb. bags $48, f.o.b. cars or trucks, New Orleans, Jacksonville, Fla., or Philadelphia.

D ACTIVATED ANIMAL STEROL, POWDERED

New York: Trend steady; price per lb. in 50- and 100-lb. bags or 100-lb. drums: 1,500 ICU 8@12¢ bagged, 12@13¢ drums, 3,000 ICU 13@17¢ bagged, 17@18¢ drums; f.o.b. or delivered basis Pennsylvania, Delaware or New York.

Cincinnati: Demand fair; trend steady; supply ample; 1,500 ICU 11@12¢ lb.; 3,000 ICU 18¢ lb., warehouse.

Kansas City: Demand fair; trend steady; supply ample; 1,500 ICU 9½@10¢ lb.; 3,000 ICU 11½@12¢ lb. in ton lots or larger.

D ACTIVATED PLANT STEROL, POWDERED

Chicago: Demand good; supply moderate; 4,000,000 U.S.P. units per lb., 15¢ lb. in ton lots; less than ton lots 17¢ lb.; 12,000,000 units per lb., 5 tons to a carload 28¢ lb.; ton lots and less 30¢ lb.

DEFLUORINATED PHOSPHATE

Tupelo, Miss.: Minimum phosphorus 13%, minimum calcium 31%, maximum fluorine .12%, $51 net ton, f.o.b. Tupelo in 100-lb. multiwall bags, $48 in bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, maximum fluorine .18% $69.12 net ton, f.o.b. Wales, in 100-lb. multiwall bags, $3 less in bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $69.50 net ton, f.o.b. Houston, 100-lb. multiwall paper bags; $66.50 in bulk.

Coronet, Fla.: Minimum phosphorus 17%, minimum calcium 34%, maximum fluorine .17%, carload $60, truckload $60.75, net ton, f.o.b. Coronet in 100-lb. multiwall bags, $57 and $57.75 in bulk.

Cincinnati: 18% phosphorus $81, sacked; 13% phosphorus $64.98, sacked, f.o.b. Cincinnati.

DICALCIUM PHOSPHATE

Texas City, Texas: 18.5% minimum phosphorus, 25% minimum calcium, 28% maximum, 0.11% maximum fluorine, granular $77.70 net ton, f.o.b. Texas City in 100-lb. multiwall bags; bulk, boxcars and hoppers, $3 net ton less than bagged material.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum 25% calcium, maximum .01% fluorine guaranteed $83.25, f.o.b. Columbia, in 100-lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Chicago: Stock food grade, 18.5% phosphorus, 20,000 lb. or more $83.25 net ton in 100-lb. papers, basis Chicago Heights, Ill., or Nashville, Tenn.; less than 20,000 lb. $93.25; 21% phosphorus, 20,000 lb. or more, $94.50, basis Chicago Heights and Nashville; less than 20,000 lb. $104.50; bulk boxcars or hoppers $3 net ton less than bagged material.

Bonnie, Fla.: Minimum phosphorus 18½%, granular $83.25; freight equalized with closest producing point, carload basis.

Minneapolis: 18.5% phosphorus, 24% calcium granular or fine ground $94.10, delivered; $3 less in bulk.

Trenton, Mich.: Minimum phosphorus 18½%, maximum fluorine .03% guaranteed $83.25, f.o.b. Trenton in 100-lb. multiwalls; minimum phosphorus 21%, maximum fluorine .03% guaranteed $94.50, f.o.b. Trenton in 100-lb. multiwall bags.

Portland: Demand good; supply ample; trend unchanged; $115.

Cincinnati: 18½% phosphorus $92@93.

DISTILLERS DRIED GRAINS

Cincinnati: Demand poor; trend steady; supply fair; by truck $62.50.

Seattle: Demand fair; trend steady; supply ample; $63, delivered, truck lots.

San Francisco: Demand fair; supply ample; solubles $85.

Louisville: Demand and trend strong; distillers down for July and until sometime in the fall; no production available; bourbon grains, last or nominal quotations: light $60, dark $62, solubles $77.

Buffalo: Demand good; trend steady to higher; supply poor; $70 nominal, bulk, Boston.

DRIED BEET PULP

San Francisco: Demand good; supply fair; $45.61.

Atlanta: Demand fair; trend steady; supply limited; $66.80, sacked, immediate.

Milwaukee: Demand good; supply tight; molasses $60, plain $61, both nominal.

Los Angeles: Demand good; trend steady; supply ample; molasses $48.

Boston: Demand and supply fair; $67.50.

Ogden: Supply normal; $38@42.

Seattle: Demand slow; trend steady; supply good; $45, delivered, carlots.

New Orleans: Demand slow; trend steady; supply ample; $52@56.

Portland: Demand good; supply limited; trend unchanged; $50.

Ft. Worth: Demand slow; supply sufficient; carlots, 50-lb. papers $59, delivered Ft. Worth.

Buffalo: Demand poor; supply fair; trend steady; $68.50, sacked, Boston.

DRIED BUTTERMILK

Boston: Demand good; supply tight; 11¢ lb.

Ogden: Supply normal; $7.25, 100-lb. bag.

San Francisco: Demand fair; supply ample; 11¢ lb.

Los Angeles: Demand good; trend steady; supply limited; $11 cwt.

Milwaukee: Demand and supply fair; trend steady; $10 cwt.

Buffalo: Demand good; trend steady;

supply limited; $10.85 cwt.
Louisville: Demand slow; trend steady; supply normal; 11@12¢ lb.
New Orleans: Demand slow; trend unchanged; supply adequate; $9.25@10 cwt.
Chicago: Demand good; supply scarce; medium acid $9.75@10.25; sweet cream $10 @10.50 cwt. in carlots.

DRIED CITRUS PULP

Los Angeles: Demand good; trend firm; supply limited; orange pulp $39 bulk, $44 sacked; lemon pulp $37 bulk, $42 sacked.
San Francisco: Demand good; supply fair; meal $52.
Atlanta: Demand good; trend steady; supply limited; $56.50, sacked, immediate; meal $50, nominal.
Boston: Demand spotty; supply adequate; priced date of shipment.
Buffalo: Demand and supply fair; trend steady; $48.50, sacked, f.o.b. Florida points.
New Orleans: Demand good; trend steady; supply adequate; $48@52.50, f.o.b. Florida.

DRIED SKIM MILK

Boston: Demand and supply fair; 11¢ lb. in carlots.
Philadelphia: Demand slow; supply light; $12.50 cwt.
Cincinnati: Demand fair; trend steady; supply adequate; 10½@11¢ lb.
Ogden: Supply normal; $15.15, 100-lb. drum.
San Francisco: Demand and supply fair; 13¼¢ lb.
Los Angeles: Demand fair; trend steady; supply limited; $14 cwt. in less than ton lots; $13.75 cwt. in ton lots.
Milwaukee: Demand and supply fair; $11 cwt.
Louisville: Demand slow; trend steady; supply normal; 11@12¢ lb.
New Orleans: Demand slow; trend steady; supply ample; $12@12.50 cwt.
Minneapolis: Steady trend; good demand; tight supply; $10.75 cwt.
Buffalo: Demand fair; trend steady; supply ample; spray $10.65 cwt.; roller $11.50 cwt.
Portland: Demand good; supply ample; trend unchanged; 13¢ lb.
Chicago: Demand improved; supply tightening; $10.50 cwt. in carlots.

DRIED WHEY

Los Angeles: Demand steady; trend stable; supply adequate; $5.90 cwt. in carloads; $6.15 cwt. in l.c.l.
San Francisco: Demand steady; supply good; $5.50 cwt.
Boston: Demand steady; supply plentiful; $5.75 cwt.
Philadelphia: Demand slow; supply light; $6.25 cwt.
Cincinnati: Demand fair; trend steady; supply adequate; $5.35 cwt.; sweet $5.75 cwt.
Seattle: Demand and trend steady; supply good; $6.40 cwt., ex-warehouse, l.c.l.
Kansas City: Demand fair; trend steady; supply adequate; $5.25, producers' points for both regular and partially delactosed, with regular in limited supply because of light production.
Ogden: Supply average; $6.90, 100-lb. bag.
Chicago: Demand good; supply fair; $5.25 cwt., f.o.b. plant.
New Orleans: Demand slow; trend firm; supply ample; $6@6.25 cwt.
Louisville: Demand slow; trend steady; supply normal; 6@6½¢ lb.
Minneapolis: Steady trend; good demand; ample supply; $5.40@5.60 cwt.; other sources quote $5.25, f.o.b. producers' plants for both regular and partially delactosed.
Portland: Demand good; supply ample; trend unchanged; $6.10 cwt.
Ft. Worth: Demand fair; supply adequate; carlots, standard $6 cwt., sacked, delivered Ft. Worth or any Texas points or in ton lots, f.o.b. warehouse, Ft. Worth.

FEATHER MEAL (HYDROLYZED)

Los Angeles: Demand very good; trend steady; no offerings; $1.28 a unit of protein.
Atlanta: Demand fair; trend steady; supply limited; $94, sacked, f.o.b. Alabama and Georgia producing points, immediate.
Boston: Demand steady; supply poor; $88, f.o.b. eastern shipping points.
Salisbury, Md.: Trend unchanged; good demand; tight supply; $94, f.o.b. producers' plants.
Ft. Worth: Demand good; supply very limited; 85 to 87% protein $95, f.o.b. trucks, north Texas plants.

FISH MEAL

Cincinnati: Demand fair; trend steady; supply adequate; 40% $160.
Seattle: Demand good; trend steady; supply limited; Alaska herring $2.35 a unit protein, ex-dock.
Boston: Demand and supply steady; 60% $130@133.
San Francisco: Demand fair; supply ample; Peruvian fish meal $2.15 a unit of protein.
Los Angeles: Demand light; supply adequate; trend steady; local production, 60% protein $2.30 a unit.
Ogden: Supply average; $2.20 a unit, f.o.b. Coast; 65% $151@153.
Atlanta: Demand fair; trend steady; supply limited; 60% $143, sacked, subject to production.
Milwaukee: Demand good; supply fair; 60% $156.50, Milwaukee.
New Orleans: Demand light; supply limited; trend steady; menhaden, 60% $134.50 @135.50; scrap $129@131, f.o.b. Gulf.
Louisville: Demand dull; trend steady; supply light; $150@160.
Minneapolis: Weaker trend; good demand; improved supply situation; 60% $152; herring $2.25 a unit, West Coast.
Chicago: Demand good; supply very limited; eastern menhaden fish meal, 60% protein $135@136; western blended, 60% protein, no offerings; Gulf $132; Northwest herring-salmon blend, no offerings; Canadian herring, 73% protein $2.20 a unit of protein, subject to production; 60% blended $167, delivered Midwest points.
Portland: Demand fair; trend higher; supply ample; $2.30 a unit, f.o.b. Vancouver.
Buffalo: Demand good; trend steady; supply limited; 60% protein, menhaden $140 bulk, $145 sacked.
Ft. Worth: Demand good; limited offerings; 60% menhaden meal $132, f.o.b. Gulf ports, subject to catch.

HAY

Ogden: Supply average; $1 bale; $12 ton in the field.
Los Angeles: Demand steady; trend unchanged; supply ample; U.S. No. 1 $30@ 32; U.S. No. 2 leafy $27@29; U.S. No. 2 green $27@28; U.S. No. 2 $25@26.
Boston: Demand and supply seasonally steady; old crop $38@40.
Philadelphia: Demand slow; supply light; $32@35.
Cincinnati: Demand poor; trend steady; supply adequate; by truck, No. 1 timothy $23.50; No. 1 red clover $25; No. 1 second cutting alfalfa $27; No. 1 clover and timothy, mixed $27; wheat or oat straw $23.
Wichita: Demand poor; supply adequate; prairie $12, alfalfa $12.
Seattle: Demand slow; trend steady; supply good; alfalfa U.S. No. 2 green $25, delivered, truck lots.
Louisville: Demand dull; trend steady; supply good; No. 1 hay, any variety of local $23@25; No. 2 hay, any variety of local $20@23; straw $18@20; July pastures best in many years; rains week of July 7 will extend pastures.
Portland: Demand slow; supply ample; trend unchanged; $23.
Ft. Worth: Demand fair for alfalfa, practically nil for prairie and Johnson grass; carlots, baled, No. 1 alfalfa $36@38, No. 2 $34@36; prairie No. 2 $24@26; No. 2 Johnson grass $22@24, delivered Texas common points.

HOMINY FEED

Cincinnati: Demand good; trend steady; supply adequate; $55.
Boston: Demand good; supply fair; $61.50.
Memphis: Demand nil; trend steady; supply ample; white $55, yellow $55.
Kansas City: Demand fair to good; trend steady; supply tight for nearby; yellow $44 bulk, $3.50 more for sacks.
Milwaukee: Demand good; supply fair; $49.50, sacked, Milwaukee.
St. Louis: Demand good; trend higher; supply adequate; yellow $52.50.
Seattle: Demand fair; trend steady; supply limited; $63, delivered, sacked, carlots.
Louisville: Demand slow; trend steady; supply normal; $53.
New Orleans: Demand slow; trend weak; supply light; $54.50@55.25.
Buffalo: Demand fair to good; trend steady; supply fair; $57.50, bulk, Boston.
Chicago: Demand fair; supply tight; $52.50@53.

LINSEED OIL MEAL

Cincinnati: Demand poor; trend steady to higher; supply adequate; new process $74; old process $76.
Boston: Demand spotty; supply light; $77.
Philadelphia: Demand and supply fair; 34% $79.
Kansas City: Demand slow; trend steady; supply tight for old process meal because plants are shut down; solvent meal $56, bulk, Minneapolis; old process meal $62 for July and $57.50 for August.
Wichita: Demand fair; supply sufficient; 34% $75.50.
Los Angeles: Demand moderate; trend firm; light offerings; local production, 29% protein $59.
San Francisco: Demand fair; supply ample; $64.
Milwaukee: Demand good; supply fair; old process $72.75; new process $66.75.
Omaha: Demand slow; supply ample; 34% solvent $61.25, bulk.
Seattle: Demand slow; trend steady; supply ample; $75, delivered, car loads, 34% protein.
New Orleans: Demand poor; trend steady; supply adequate; $80.50@81.
Louisville: Demand slow; trend strong; supply light; old process $76.25; new process $74.75.
Minneapolis: Steady trend; good demand; adequate supply; $56 bulk.
Chicago: Demand fair; supply adequate; solvent $67@67.50; expeller $68@69.
Portland: Demand good; supply ample; trend unchanged; $73.
Ft. Worth: Demand slow; offerings light; carlots, 34% extracted, July $81.75; pellets $2.50 premium.

MALT SPROUTS

Cincinnati: Demand fair; trend steady; supply adequate; No. 1 $44.
Boston: Demand and supply limited; $42.50, nominal.
Milwaukee: Demand good; supply fair; odd weights $38.50; even weights $40.50.
New Orleans: Demand fair; trend steady; supply adequate; $37.50@39.
Chicago: Demand fair; supply adequate; No. 1 $38@38.50.

MEAT AND BONE MEAL

San Francisco: Demand good; supply fair; $2.25 a unit of protein.
Omaha: Demand good; supply tight; $120, sacked, Omaha basis.
Los Angeles: Demand improved; trend stronger; light offerings; 50% protein $2.25 @2.30 a unit.
Cincinnati: Demand good; trend steady; supply very short; 50% meat and bone scraps $119.50, sacked, Cincinnati.
Boston: Demand good; supply fair; $1.80 a protein unit; converted 50% $102.50.
Seattle: Demand good; trend steady; supply ample; $102.50, ex-warehouse, 50% protein.
Wichita: Demand good; supply sufficient; 50% $115, f.o.b. plant; 55%, no quotations, no offerings.
New York: Demand excellent; trend upward; supply fair; 50% $105, 55% $115, bulk; 50% $108, 55% $118, sacked.
Kansas City: Demand good; trend steady; supply tight; 50% meat and bone scraps $117.50@121, sacked.
Ogden: Supply normal; $110 in 100-lb. bags.
St. Louis: Demand slow; trend steady; supply ample; $120.
St. Paul: Firm trend; very good demand but with less pressure than last week; extremely tight supply; $122@130 for 50% meat and bone meal.
Louisville: Demand good; trend strong; supply fair; $107.50@112.50.
New Orleans: Demand good; trend steady; supply sufficient; $104@109.
Portland: Demand fair; supply limited; trend unchanged; $2.10 a unit protein.
Chicago: Demand fair; supply tight; 50% protein $110@112.50.
Buffalo: Demand good; trend stronger; supply limited; 50% meat scraps $115 bulk, $120 sacked.
Ft. Worth: Demand good; supply extremely light; meat and bone, 50% $115, f.o.b. or delivered Ft. Worth.

MILLFEED

Minneapolis: Stronger trend; improved demand; supply tight for nearby; bran $33 @33.50, standard midds. $38@38.50, flour midds. $46, red dog $48@51.
Kansas City: Demand fair; trend mixed, steady for nearby but weaker for forward on bulk feeds; supply tight for nearby, adequate for next week; bran $27.25@28, shorts $33.50@34.25, sacked; bran $24.75@ 25.50, shorts $31.50@32.25, middlings $30.75 @31.50, bulk.
Wichita: Demand fair; supply adequate; basis Kansas City: bran $27.75@28.25, shorts $33.75@34.25; bran declined $2.75 and shorts $7.75, compared with the preceding week.
Ft. Worth: Demand good at lower price levels; limited offerings for immediate shipment; carlots, burlaps, prompt, bran $35.50, gray shorts $42.50, delivered Texas common points; $3.50 lower on bran and $6 lower on shorts compared with previous week.
Chicago: Millfeeds slipped to lower levels during the week ending July 9, reflecting increasing supplies and satisfaction of demand. High prices of recent weeks grew out of a temporary shortage between wheat crops, observers said, and the market is reverting to normal. Quotations: bran $36@ 36.50, standard midds. $41.50@42, flour midds. $49@50, red dog $51.50@52.
St. Louis: Demand fair; trend lower; supply ample; bran $32.75@33.25, shorts $39@39.50, sacked; bran $31@31.50, shorts $36.50@37, middlings $36@36.50, bulk.
Cincinnati: Demand poor; trend lower; supply adequate; bran $40; middlings $45.
Omaha: Demand steady; supply ample; bran $30; gray shorts $37, sacked; $34 bulk, Omaha basis.
Boston: Demand cautious; supply irregular; bran $47.50, middlings $53.
Buffalo: Mixer demand weakened and bran and middlings declined. The mixer business, however, ranged from "good to excellent." Running time of the mills was at a full week. Quotations July 9: bran $37.50@39, middlings $43.50@45, red dog $55.50@56. The bulk differential on bran and middlings being $4.50 ton.
New York: Demand and supply good; trend lower; bran $48@48.50, standard midds. $53@54.
Philadelphia: Demand dull; supply fair; bran $47, standard midds. $56, red dog $64.
New Orleans: Demand good; trend steady;

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supply sufficient; bran $40@40.75, shorts $46@46.75.

Louisville: Demand dull; trend very weak; supply good; off as much as $12; bran $40, mixed feed $43.50, shorts $47.50, middlings $50.

Memphis: Demand poor; trend lower; supply ample; wheat bran $36, gray shorts $42, standard midds. $42.

Seattle: Demand fair; trend steady; supply limited; $38, delivered, common transit points, carlots.

Portland: Demand slow; supply ample; trend unchanged; $38.

San Francisco: Demand fair; supply ample; millfeed $46.50, red bran $51.50.

Los Angeles: Demand and trend weaker; supply adequate; standard mill run $45.50@46; red bran $46.

Ogden: Supply average; to Utah and Idaho: red bran and mill run $36, middlings $41; to Denver: red bran and mill run $43, middlings $48; to California: red bran and mill run $43.50, middlings $48.50, f.o.b. San Francisco and Los Angeles.

MINERAL FEED

Sioux City: 50-lb. mineral blocks 8.2% phosphorus $92; 7.5% phenothiazine sheep mineral blocks $4 each.

San Francisco: Demand steady; supply good; all-purpose with iodine $70.

Seattle: Demand fair; trend steady; supply good; mixer mineral $48, ex-warehouse; all-purpose mineral $85, ex-warehouse.

Wichita: Demand good; supply adequate; all-purpose with iodine, 50-lb. blocks $95, 100-lb. bags $90, f.o.b. plant.

Ogden: Supply average; $110 in 50-lb. blocks; $98, granular, 50-lb. bags.

Portland: Demand good; supply ample; trend unchanged; $42.

Ft. Worth: Demand fair; supply ample; all-purpose granules $59, block $94; mineral phosphorus 6% granules $106, block $110; cattle-sheep mineral, 7% phosphorus granules $99, block $103; hog mineral phosphorus 3½% granules $88, phosphorus 2% $78 (all in 50-lb. paper bags).

MOLASSES

Ft. Worth: Demand fair; supply sufficient; blackstrap 16¢ gal., f.o.b. Houston; delivered Ft. Worth, truck $35.06, seller's market price on date of shipment.

Buffalo: Demand fair; trend steady; supply adequate; 18½¢ gal., f.o.b. Albany.

Kansas City: Demand slow; trend steady; supply adequate; 14¼¢ gal., tank car, New Orleans for July, 14½¢ for August.

Seattle: Demand fair; trend steady; supply good; $25, f.o.b. Seattle, tank car lots or truck lots.

New York: Demand and supply good; trend steady; blackstrap 18¢ gal., tank cars, tank wagons, f.o.b. New York.

Boston: Demand steady; supply plentiful, 18½¢ gal. in tank cars.

Memphis: Demand fair; trend steady; supply ample; blackstrap 14½¢ gal., tank car, f.o.b. New Orleans.

San Francisco: Demand and supply good; $25, f.o.b. cars, Richmond, Cal.

Atlanta: Good demand; steady trend; limited supply; citrus $20, bulk, f.o.b. Florida producing points, immediate.

Los Angeles: Demand steady; trend unchanged; supply ample; $25 bulk, f.o.b. tank cars; $25.25, bulk, f.o.b. tank trucks.

Milwaukee: Demand and supply fair; blackstrap 13½¢ gal., f.o.b. New Orleans.

St. Louis: Demand slow; trend steady; supply ample; 14½¢ gal., New Orleans.

Louisville: Demand slow; trend firm; supply ample; 14½¢ gal., blackstrap, tank car lots, New Orleans.

New Orleans: Demand slow; trend steady; supply ample; 15¢ gal., tank cars and trucks; 600-lb. customers' drums $9.62.

Minneapolis: Steady trend; moderate demand; ample supply; 14½¢ gal., New Orleans; $34.50, f.o.b. terminal.

NIACIN

New York: Trend steady; $8 kilo, 10-kilo lots; $8.20 kilo, 5- and 2½-kilo lots; $8.30 kilo, 1-kilo lots; freight prepaid or paid to destination.

OAT PRODUCTS

Portland: Demand slow; supply ample; trend unchanged; rolled $63, ground $60, cleaned $63.

Chicago: Demand fair; supply adequate; reground oat feed $13.50@14; fine ground feeding oatmeal $70@72; feeding rolled oats $82@84.

Ft. Worth: Demand slow; supply sufficient; oat millfeed $43.95; reground oat millfeed, 3% protein, sacked $22.45; 8% protein, bulk $27.

Memphis: Demand poor; trend steady; supply ample; 3½% protein, reground oat feed $20.50.

Philadelphia: Demand slow; supply fair; pulverized white $53; Canadian oat feed $33; domestic oat feed $25.

Cincinnati: Demand poor; trend steady; supply adequate; reground oats $17; pulverized white oats $49; rolled oats $85.

Boston: Demand steady; supply fair; white pulverized $55; ground mixed $45.30; reground oat feed $23.

Seattle: Demand fair; trend easier; supply ample; $48, bulk, delivered, truck lots.

Los Angeles: Demand fair; trend unchanged; supply adequate; pulverized, local production $57.

Louisville: Demand slow; trend steady; supply normal; reground $22; rolled $36.50; feeding $79.50; pulverized white $51; crimped white $69.50.

Minneapolis: Stronger trend; improved demand from more forward buying; adequate supply; feeding rolled $32; pulverized $44; feeding oatmeal $70; reground $17; crimped $58.50.

OYSTER SHELL

Portland: Demand good; supply ample; trend unchanged; western $32, eastern $38, granite grits $26, shell flour $16.

Los Angeles: Demand steady; trend unchanged; supply ample; $14.50.

San Francisco: Demand fair; supply ample; local $15, eastern $26.

Boston: Demand and supply steady; in paper $25.36.

Cincinnati: Demand fair; trend steady; supply adequate; $21.75.

Seattle: Demand and trend steady; supply good; eastern $36, delivered, carlots.

New Orleans: Demand good; trend steady; supply plentiful; $14.80@15.

Louisville: Demand good; trend steady; supply normal; in 80-lb. bags $23.17, 50-lb. bags $23.42, 25-lb. bags $25.67.

PEANUT OIL MEAL

Atlanta: Demand fair; trend steady; supply limited; 45% $67, sacked, immediate.

PEAT MOSS

Portland: Demand slow; supply ample; trend unchanged; $3.25 bale.

Chicago: Demand moderate; supply moderate; $3.65@3.75, standard 7⅛ cu. ft. bale.

Boston: Demand and supply steady; $3.15 bale in carlots.

Philadelphia: Demand slow; supply fair; $2.98 bale, f.o.b. pier.

New York: Demand and supply good; trend lower; Canadian, 7 cu. ft. bale, veneer wrapped $3.32, freight prepaid; German 7⅛ cu. ft. bale $2.87, at dock, New York.

Seattle: Demand fair; trend easy; supply good; $2.70, bale, delivered truck lots.

Los Angeles: Demand and trend steady; supply adequate; Canadian 6.1 cu. ft. bales $3.85.

San Francisco: Demand fair; supply ample; $3.75 bale.

POTASSIUM IODIDE, U.S.P.

New York: Trend steady; granular or crystals $1.90 lb. in 250-lb. drums, $1.92 lb. in 100-lb. drums, $1.95 lb. in 25-lb. drums; 99% KI in calcium stearate or carbonate mixtures, $1.81 lb. in 250-lb. drums or 200 lb. lots, $1.83 lb. in 100-lb. drums, $1.86 lb. in 25-lb. drums; f.o.b. New York, New Jersey or Pennsylvania, freight allowed to destination on 100-lb. drums or larger packings.

Cincinnati: Demand good; trend steady; 90% KI in calcium stearate or carbonate mixtures, 250-lb. drums $1.81; 200 lb. in 100-lb. drums $1.83; 25-lb. drums $1.86, f.o.b. Cincinnati.

POULTRY BY-PRODUCTS

Ft. Worth: Demand good; supply very limited; 55% protein $95, f.o.b. north Texas plant.

Boston: Demand active; supply short; $113, f.o.b. eastern shipping points.

Los Angeles: Demand good; trend steady; no offerings; $2 a unit of protein.

Atlanta: Demand good; trend strong; supply limited; $110.50, sacked, f.o.b. Alabama and Georgia producing points, immediate.

Salisbury, Md.: Trend unchanged; good demand; tight supply; $101, f.o.b. producers' plants.

RIBOFLAVIN

New York: Trend steady; feed grade (in feed supplements) 4½¢ gm. in 3.36 to 16 gm./lb. mixtures, freight prepaid or paid to destination.

Cincinnati: Trend steady; feed grade (in feed supplements) 4¢ gram in 3.36 to 16 gm./lb. mixtures, freight prepaid or paid to destination.

RICE BY-PRODUCTS

Ft. Worth: Demand fair; supply moderate; carlots, rice bran $29@30, prompt shipment, f.o.b. south Texas rice mills; hulls $2, f.o.b. mills.

San Francisco: Demand fair; supply ample; bran $45; polished $49.

Los Angeles: Demand fair; trend steady; supply limited; bran, California production, high fat content $52.

Atlanta: Demand fair; trend steady; supply limited; bran $41, sacked, immediate.

SCREENINGS

Chicago: Demand fair; supply adequate; ground grain screenings $29; Canadian, bulk $19.

Buffalo: Demand good; trend steady to higher; supply fair; ground in sacks $27, New York, lake and rail; unground in bulk $22.25, New York.

Ft. Worth: Demand nil; supply sufficient; 13% protein, ground $28, nominal.

Cincinnati: Demand fair; trend steady; supply adequate; ground screenings $33.85; barley $23.35.

Minneapolis: Weaker trend; very light supplies; demand just fair; lights $4@10, mediums $11@18, heavies $19@30; Canadian ground $20; Canadian, bulk $15; flaxseed screenings $28; oil type flaxseed screenings $36, basis 15%.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Atlanta: $20.40@20.67.
Buffalo: $25.31@25.45.
Chicago: $24.77@24.90.
Cincinnati: $23.47@23.60.
Des Moines: $25.23@25.35.
Kansas City: $24.88@25.
Memphis: $22.20@22.47.
Minneapolis: $25.92@26.06.
Philadelphia: $24.32@24.45.
St. Louis: $24.14@24.27.

SORGHUMS

Ft. Worth: Demand fair; supply sufficient; carlots, bulk, No. 2 yellow milo $2.37@2.40, Texas common points.

Los Angeles: Demand good; trend easier; supply ample; milo $2.57½ cwt., bulk.

SOYBEAN OIL MEAL

Ogden: Supply normal; $81@86.

San Francisco: Demand fair; supply ample; $97.95.

St. Louis: Demand good; trend higher; supply tight; $77.

Omaha: Demand good; supply tight; 44% solvent $77.25, bulk, delivered Omaha.

Los Angeles: Demand improved; trend stronger; small offerings; $99.45.

Atlanta: Demand good; trend steady; supply limited; 44% $83, sacked, immediate.

Milwaukee: Demand good; supply fair; $65, bulk, Decatur.

Philadelphia: Demand spotty; supply fair; 44% $60.50, bulk, Decatur.

Cincinnati: Demand poor; trend higher; supply adequate; $64, bulk, Decatur.

Boston: Demand improved; supply fair; 44% $61.25, 50% $70, both bulk prices, f.o.b. Decatur.

Decatur: Demand good; supply tight; 44% bulk, unrestricted $66@66.50; 50%, none available for nearby.

Portland: Demand good; supply ample; trend firm; $58, f.o.b. Decatur.

Chicago: Supplies of soybean oil meal remain very tight and prices moved sharply higher during the week ending July 9. Feed manufacturers continue to order and processors are hard pressed to fill demand. Quotations: 44% soybean oil meal $77; no 50% meal is available.

Ft. Worth: Demand good; limited offerings for nearby shipment; carlots, 44% $59 immediate, $58 last half July, truck delivery $52 scattered July.

Seattle: Demand steady; trend strong; supply ample; $99, delivered, carlots.

Wichita: Demand good; supply adequate; 44% $76.50, 50% $85.50, f.o.b. Wichita.

Kansas City: Demand good though not broad; trend steady; supply very tight for nearby; meal for Kansas City and western shipment, this week $64@65 bulk, Decatur; $62 for July; unrestricted $66.50@67.

Memphis: Demand good; trend steady; supply limited; prime 44% solvent $74, sacked, f.o.b. Memphis.

New Orleans: Demand good; trend weaker; supply adequate; 44% $76@76.50.

Louisville: Demand slow; trend very strong; supply light; $75.93, up $6 ton.

Minneapolis: Very firm trend; strong demand; tight supply for nearby; 44% $80.25 for next week.

TANKAGE

New Orleans: Demand and supply good; trend steady; $120@132.

Louisville: Demand good; trend strong; supply light; 60% $112.50@117.50.

Cincinnati: Demand good; trend steady; supply very short; 60% digester $119.50, sacked, Cincinnati.

Ft. Worth: Demand fair; supply extremely light; 60% digester $115@120, f.o.b. Ft. Worth.

Chicago: Demand fair; supply tight; 60% protein $110@112.50.

Kansas City: Demand good with mixers buying some locally but much being shipped north; trend steady; supply limited; 60% digester $118@123, sacked.

Wichita: Demand good; supply sufficient; 60% $115, f.o.b. plant.

St. Louis: Demand slow; trend steady; supply ample; $120.

Omaha: Demand good; supply tight; $122.50, Omaha basis.

St. Paul: Firm trend; demand off; supply limited; 60% digester $120@125.

VITAMIN E FEED SUPPLEMENT

Cincinnati: Demand good; trend steady; any quantity in 100-lb. drums $1.70; in 25-lb. drums $1.75; freight allowed to destination.

New York: Demand and supply good; trend steady; 100-lb. drums $1.70 lb., 25-lb. drums $1.75, f.o.b. manufacturing plants, freight allowed and goods insured to destination.

Rochester, N.Y.: Demand and supply good; trend steady; 100-lb. drums $1.70 lb., 25-lb. drums $1.75, f.o.b. manufacturing plants, freight allowed and goods insured to destination.

WHEAT GERM MEAL

New Orleans: Demand good; trend strong; supply adequate; $79@80, cottons.

Buffalo: Demand and supply fair; trend steady to higher; commercial grade $74, sacked, f.o.b. Buffalo.

Chicago: Strong trend; very good demand for very tight supply; $85.

EXPANSION PLANNED

PORTLAND, ORE. — Portland's Dairy Cooperative Assn., milk marketing and processing organization for some 2,000 Oregon and southwestern Washington dairy producers, announces the scheduled start of an expansion project involving close to $1 million for land, construction costs and equipment. Will W. Henry, general manager, points out that the project calls for construction of an addition to the organization's building, including four building units.

BROILERS

(Continued from page 1)

but seven of the 22 states reported lower placements compared to the previous week. The greatest decreases from the previous week were in Texas, Georgia and Virginia.

Delmarva's growers started 4,320,000 broiler chicks last week. This was 2% more than a week earlier and 11% above the corresponding week of last year. The number started increased 12% in Delaware and 6% in Maryland, compared to the same week a year ago.

Delmarva's hatcherymen set 5,367,000 eggs to produce broiler-type chicks. At this level, settings were 2% less than the previous week, but 21% above the comparable week last year.

The Delmarva growers sent 3,542,000 broilers to market last week. This was 4% less than the previous week but 12% more than the corresponding week of 1957. Of the total sold, 2,962,000 were processed locally and 580,000 were shipped out alive.

Hatcherymen in Delmarva based prices paid for hatching eggs on the following markets: f.o.b. Boston, special large brown, July 3, 52-53¢; July 8, same.

Group Reviews USDA Committee System

WASHINGTON—Continued operation of the U.S. Department of Agriculture's advisory committee system was endorsed at a recent joint meeting of the agricultural research policy committee of the USDA and chairmen of the department's 25 research and marketing advisory committees.

The group made the announcement after reviewing the system. They also affirmed the importance of research to agriculture.

Members of both the agricultural research policy committee and the advisory groups are appointed by the secretary of agriculture under provisions of the Research and Marketing Act of 1946. They represent farmers and ranchers, state and private research organizations and industries concerned with agriculture. All are from outside the federal government.

Reporting to the meeting as chairman of a subcommittee on advisory committee functions, Dr. W. E. Morgan, president of Colorado State University, pointed out that these USDA advisory groups "provide a two-way bridge between users of the USDA's research findings and scientists doing the research."

The meeting agreed that the country's 4 million farmers, "although making up, in the aggregate, the nation's largest industry are too small as individuals to do their own research." Members of the two groups concluded that "public support of agricultural research is therefore essential. Research is a practical necessity in finding the answers to present-day farm problems and in charting a course for future program action in the best interest of the nation."

Emphasizing the need for continued fundamental studies to discover new scientific principles of value in farming, the meeting agreed that "basic research will set the pace, to a large degree, for more productive applied research in the future."

NEW HONEGGER DEALERS

FAIRBURY, ILL. — Six midwest dealers have announced that they will handle the complete line of products manufactured by Honeggers' & Co., Inc., Fairbury and Forrest, Ill., including livestock and poultry feeds, Honegger layers and farm buildings and equipment. The six are Mildred Bros. Hatchery, Warrenton, Mo.; Kipling Hatchery, Colchester, Ill.; Allbritten Brothers, Metropolis, Ill.; Midwest Hatchery, Lockport, Ill.; Irene Elevator, Cherry Valley, Ill.; Holland (Mich.) Co-op.

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FARM LAW

(Continued from page 1)

and it probably will be passed virtually as approved by the Senate Agriculture Committee on that day.

It has been learned from informed sources that floor efforts to amend the committee bill as to inclusion of a two-price system for wheat and the so-called "self-help bill" for the dairy industry will be rejected.

But bipartisan strategy has adopted this method of bringing this farm legislation to a boil, whereby the stubborn attitude of the House Agriculture Committee may be bypassed.

The Senate plans to amend on the floor the Senate farm bill by adding its previously passed Public Law 480 extension bill which does not permit any liberalization of the administrative barter provisions of USDA.

The pending House bill would radically alter the administrative controls over barter deals for U.S. surplus agricultural commodities.

In fact, this week USDA officials said that there were still open option calls for U.S. surplus agricultural commodities—wheat, feed grains and cotton—amounting to more than $28 million. According to USDA information, these are now and have been currently offered in world markets at substantial discounts under world market prices.

During the past 10 days it was expected that the Congress would take up on the House side its liberalized barter proposals. But it developed subsequently that the Democratic floor leader, John McCormack (D., Mass.) told the House Agriculture Committee chairman, Harold Cooley (D., N.C.) that he was in effect opposed to the barter amendment to PL 480 as passed by the Senate and waiting House attention.

PL 480 Extension

The over-all bipartisan strategy now is to have the Senate enact its farm bill with an amendment carrying a renewed passage of its PL 480 extension bill and send it to the House for action.

It is also understood that the House leadership, which is now expected to openly oppose the House bill for PL 480 extension on the basis of its barter amending provision, will advance the Senate farm bill to the House floor for passage.

Senate passage of its farm bill is assured, and with the bipartisan or, better, the majority leadership in that chamber, approval would mean that the Senate farm bill may go to the White House within the next 10 days.

Farm legislation this year is primarily and essentially cotton legislation, as noted above.

It is true that the House opposition which is using the PL 480 barter provisions as a trading object does not like the liberalized acreage provisions of the Senate bill since the provisions do not do enough for the small, one-two bale cotton farmers.

But those in the House that are opposed to the provisions are without formidable ammunition or strength to sustain their fight. With the House leadership opposed, it must be expected that when the Senate sends its bill to the House floor, the shrinking strength of the House cotton bloc will vanish in a deluge of opposition strength.

The Senate farm bill is also a corn bill but with a decidedly secondary consideration.

The cornerstone of the leadership strategy in the majority side is to push through a cotton bill as written by the Senate.

The corn side of the farm bill, as reported by the Senate, is not inconsequential. It is important in that it ends acreage allotments for that crop and kills the old parity concept for price supports for that crop and other feed grains. It does, however, also make mandatory price support for the other feed grains in relation to their feed value to corn.

That latter provision is not material since for many years it has been a practice of the USDA to support the minor feed grains when the corn price has been supported.

Under the Senate farm bill minor feed grains would be supported at not less than 65% of parity adjusted to their price relationship to corn.

USDA officials say that the Senate bill, which would support corn for the next three years at not less than 90% of the prevailing average market price for that crop in the preceding years, will mean that corn would be supported at not more than $1.18 @1.20 bu. But there would be a minimum level of price support for corn on a national average basis of not less than $1.10 bu.

In conclusion, it must be again emphasized that the Senate bill has the green light for passage from bipartisan leadership in both chambers. The House barter amendment to PL 480 will be rejected, probably through the strategy noted above.

Oregon Group Plans To Build Feed Mill

TILLAMOOK, ORE. — The Tillamook County Creamery Assn. has authorized the construction of new feed manufacturing, warehouse and sales facilities for its feed department. The building, to be constructed in Tillamook's business district on the same site as the old facility, will cost approximately $285,000.

Assistance on engineering and supervision is being received from Reid-Strutt Co., Portland.

The facility will be constructed in two stages to permit the manufacturing operations to continue without interruption. The steel and concrete building will house equipment which the association says will make possible rigid control of the manufacturing process while reducing the cost of purchasing and handling feeds. More sales room space and more convenient parking and loading facilities will be included.

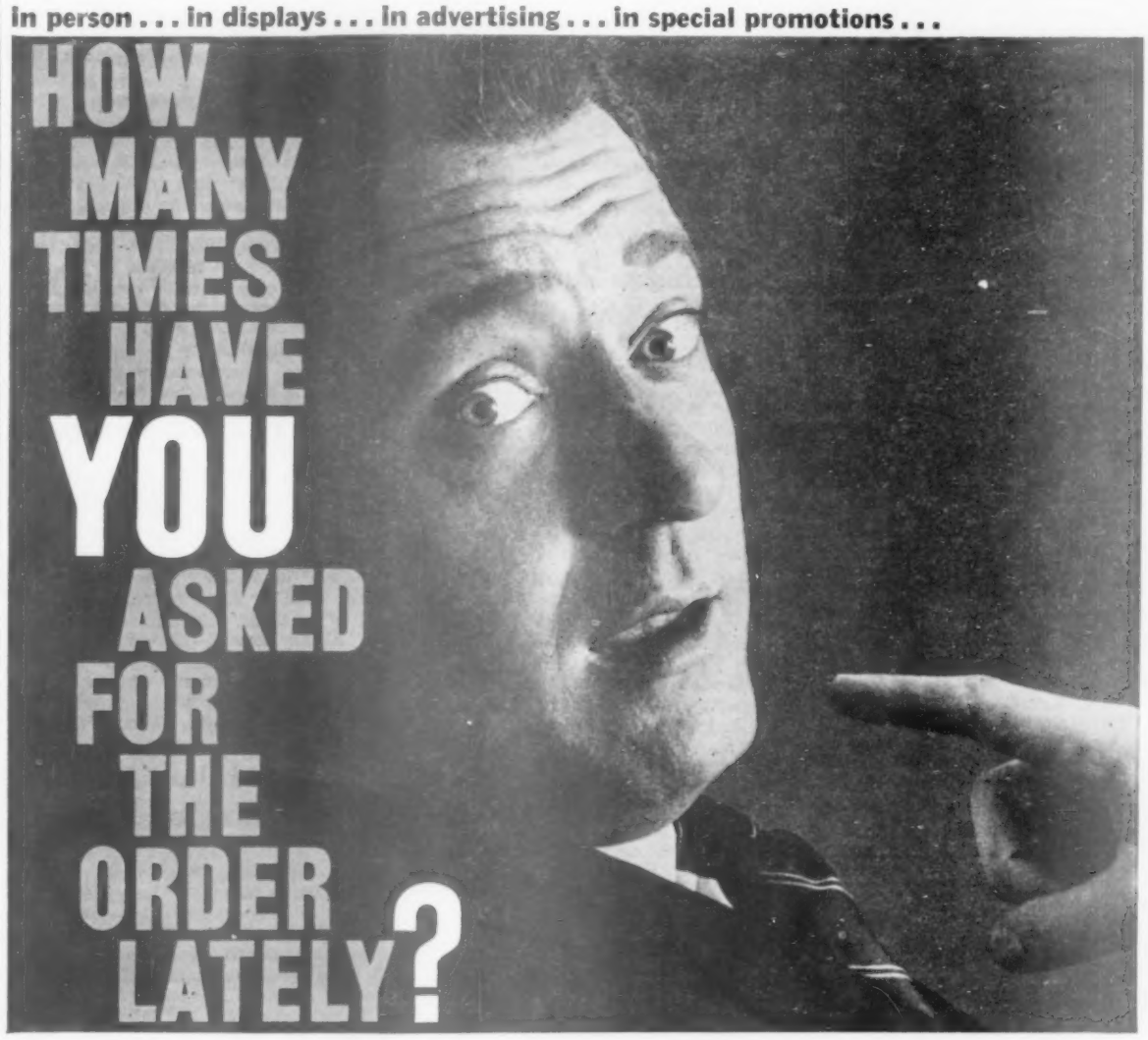
RED MEAT OUTPUT DOWN 8%

WASHINGTON—Production of red meat during the first five months of 1958 totaled 9,919 million pounds, a drop of 8% from the 10,771 million pounds produced during the same period of 1957, according to a report from the Crop Reporting Board of the U.S. Department of Agriculture. Of the total volume, 5,243 million pounds were beef, down 10%; 465 million pounds were veal, down 20%; 3,916 million pounds were pork, down 4%, and 295 million pounds were mutton and lamb, down 3% from the same period in 1957.

TO BUILD ELEVATOR

POLK, NEB.—Stockholders of the Farmers Cooperative Grain Assn. here have voted to erect a new grain storage elevator this summer.

in person . . . in displays . . . in advertising . . . in special promotions . . .



get the goods and then go get the sale!

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C. W. Dodgen | John Dodgen | Joe Dodgen | Jack Dodgen

Dodgen Sells Interests In North American Co.

SIOUX CITY, IOWA—The interests of Dodgen Industries in the North American Manufacturing Co., Sioux City, have been purchased by Elmer K. Hansen, president, and majority stockholder of the North American firm.

The North American company was a production affiliate of Dodgen Industries. The transaction was announced jointly by both firms. The interests purchased by Mr. Hansen were those of C. W., Jack, Joe and John Dodgen.

At the same time, North American assumed the national sales and service responsibilities from Dodgen Associated Manufacturers, Inc., for the "Bulkanizer" line of bulk feed truck bodies and the "Grain-O-Vator" line of farm feed wagons.

Elmer K. Hansen

Mr. Hansen, commenting on this change, said it will make very little difference to the feed trade. He stated that the products, personnel and company policies will be the same, and that the only difference will be that, except in Iowa, Illinois, Nebraska, Arkansas, Louisiana and Mississippi, the trade will be doing business with North American and its appointed distributors rather than with Dodgen Industries.

Marvin L. Moreland and Don P. Dillman, formerly sales manager and advertising manager, respectively, of Dodgen Associated, have assumed the same positions with North American. John W. Flett, formerly production manager of North American, has been appointed secretary of this corporation, replacing Joe W. Dodgen.

Dodgen Industries will concentrate its operations in Dodgen & Co. and Dodgen Investment Co. at Ft. Dodge, Iowa; Silbaugh Manufacturing Co. at Humboldt, Iowa, and Dodgen-Arkansas Co., Hot Springs, Ark.

A new division of Dodgen Industries has been established at Humboldt to sell, install and service "Bulkanizer" bulk feed bodies and Dodgen Combination bag and bulk bodies and related items. John N. Dodgen has been appointed president and general manager of this division and of the Silbaugh Manufacturing division. James M. Roach will remain in charge of bulk feed body sales.

Dodgen & Co. at Ft. Dodge will expand its sales and distribution of farm feed lot equipment, including the "Grain-O-Vator" line, through its implement dealer organization in Iowa, Illinois and Nebraska. C. W. Dodgen is president of this firm, Jack E. Dodgen, secretary-treasurer and Robert E. Nolen, sales manager.

Michigan Survey Shows Profits Greater With Larger Laying Flocks

EAST LANSING, MICH.—Laying flocks of more than 2,000 birds will return higher profits than smaller flocks, according to a recent Michigan State University survey of 95 flock owners.

Of the 95 flocks studied, those of 2,000 birds or more returned $1.59 per hour for labor, while flocks of 1,000 birds and smaller returned only 59¢ per hour for labor, according to Dr. Carl T. Wright, university agricultural economist.

The survey summarized records kept by 95 flock owners—the flock sizes varied from 127-6,630 birds—during the 1956-57 laying year. Seventy-five flocks were light breeds, of which 40 were inbred or strain crosses. Thirty-seven of the 95 owners retailed part of their eggs, 14 sold to hatcheries and the rest sold to egg buyers or grading stations.

The survey also indicated the following information:

Average price for eggs in Michigan in 1956-57 was 33.2¢ a doz.; in 1955-56 it was 40.6¢, and the average for 1950-55 was 42.8¢. Average price received by the 95 flock owners surveyed in 1956-57 was 36¢ a doz., slightly higher than the state average, and 9¢ below the previous year.

Feed prices were about 20¢ per cwt. higher in 1956-57 than the previous year. Feed required to produce a dozen eggs was 5.5 lb. Average egg production based on monthly averages was 218 eggs per hen, or 12 eggs higher than the year before.

Return from sale of eggs, eggs used and manure credit was $6.60 a bird in 1956-57, or $1.19 less than in 1955-56. Price received was 36¢ so labor return was lower than the established hourly rate used for figuring costs. Labor return was 59¢ an hour, compared with $1.24 in 1955-56.

Labor required per bird varied from .69 hour on the largest flocks to 1.34 hours on the smallest flock. The high 10 flocks returned $2.11 an hour of labor, while the low 10 lost $1.51 an hour.

The major differences in net returns were due to size of flock, labor, efficiency, mortality and culling. The market for eggs was also a factor.

Co-op, Milling Firm In Washington Merge

ODESSA, WASH.—Big Ben Milling Corp., Davenport, Wash., recently merged with the Odessa (Wash.) Union Warehouse Co-op, according to Ed Remillong, who is continuing as manager for the grain dealing firm.

Mr. Remillong said that more than 75% of the Big Ben members gave their consent to the unification. He said the Davenport personnel will remain the same.

There will be very little noticeable change in the Davenport operations, except that detail and record work will be handled at Odessa, and the business will be operating on a more sound economic basis, Mr. Remillong declared.

"The Odessa cooperative has not issued a patronage certificate in 47 years, always operating on a cash basis," according to Mr. Remillong. "While the 1957-58 fiscal year was second best in history profit-wise for Big Ben, we expect an even larger volume during the coming year because of the advantage of the cash patronage basis."

OSCAR BOLLIN DIES

TOLEDO, OHIO—Oscar J. Bollin, Toledo, died June 30 in his home. A native of Toledo, Mr. Bollin retired five years ago after 40 years as secretary-treasurer of the Toledo Grain & Milling Co. Surviving are his widow, one son, one daughter and four grandchildren.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
May 3	1,101	629	863	1,035	176	749	2,201	1,646
May 10	1,117	682	923	1,074	208	830	1,943	1,962
May 17	1,175	623	963	986	222	962	2,215	1,769
May 24	1,151	682	931	1,120	207	924	2,136	1,919
May 31	1,166	783	938	1,071	163	843	2,136	1,921
June 7	1,211	697	916	1,031	221	778	2,232	1,945
June 14	1,202	735	1,010	1,106	215	852	2,196	2,014
June 21	1,220	760	1,005	1,143	188	861	2,084	1,944
June 28	1,234	688	1,008	1,160	191	849	2,056	1,987
July 5	1,184	649	932	1,023	191	791	2,275	1,863

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
May 3	1,309	632	2,695	363	7,047	263	3,082	1,812
May 10	1,395	654	2,771	372	7,134	252	3,180	1,826
May 17	1,472	631	2,778	331	7,437	259	3,072	1,897
May 24	1,515	686	2,861	410	7,338	276	3,399	1,914
May 31	1,530	685	2,984	372	7,551	270	3,350	1,972
June 7	1,555	651	2,951	444	7,211	241	3,213	2,073
June 14	1,524	688	2,889	395	7,063	338	3,251	2,080
June 21	1,612	619	2,947	369	7,153	282	3,310	2,035
June 28	1,630	579	2,889	417	6,878	260	3,251	2,113
July 5	1,476	678	2,876	386	6,724	272	3,166	2,145

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1958	Total 22 areas 1957
May 3	3,051	513	2,723	362	161	1,034	33,447	28,547
May 10	3,129	506	2,856	324	207	1,088	34,433	28,857
May 17	3,098	521	2,860	355	221	1,228	35,075	28,428
May 24	3,317	486	2,983	364	224	1,068	35,911	28,821
May 31	3,191	538	2,996	428	176	1,202	36,266	28,793
June 7	3,433	509	2,924	431	200	1,114	35,981	29,274
June 14	3,401	505	2,829	453	185	1,120	36,051	29,328
June 21	3,347	512	3,015	394	216	1,203	36,219	29,784
June 28	3,199	450	2,969	365	204	1,142	35,519	29,256
July 5	3,096	413	2,811	389	212	1,147	34,699	29,277

Field Days Planned For Kentucky Feeders

LEXINGTON, KY.—The results of a year's research on beef, sheep, swine and meats will highlight the program of two field days planned for Kentucky livestock producers.

The first will be held at the Coldstream Farm near Lexington July 16, the second July 18 at the Princeton experiment substation farm.

The use of synthetic hormone implants on grazing steers will be emphasized in the beef sessions, with other subjects covering the feeding of distiller's feeds with low-quality roughage, the use of tranquilizers on growing steer calves and the advantages of performance testing of beef bull herd sires.

In the swine division, subjects will range from winter pastures versus dry-lot feeding of bred gilts, to self-feeding versus hand-feeding bred gilts during winter gestation, and will include a discussion on the control of scours in young pigs.

Wintering ewe lambs will headline the sheep phases, at two levels of nutrition, and will include the use of silage with and without trace minerals for pregnant, lactating ewes, and will outline recent lamb-fattening trials.

Carcass evaluation of hogs will be one of the subjects on the meat agenda, and characteristics of hams and bacons from hogs of different degrees of fatness will be reviewed.

C. G. Randall, U.S. Department of Agriculture official of the Farmer Cooperative Service, will discuss vertical integration in the livestock industry.

A barbecue luncheon will be served at Lexington by the Bluegrass Stockyards. The Field Packing Co. and the Farmers Elevator will be hosts at the Princeton field day.

Dannen Mills Buys Kansas Elevator

ST. JOSEPH, MO. — Dwight L. Dannen, president of Dannen Mills, Inc., has announced the purchase by his firm of the West First Street Elevator in Newton, Kansas. Donald Drummond has been named temporary manager.

The property includes a 15,000-bu. elevator and a large feed warehouse which will be used to supply other Dannen elevators in the area. The elevator is located on the Santa Fe Railroad and two main highways.

Negotiations for the acquisition were handled by Gene Packwood, Dannen country station division manager; Warren Van Dyke, Southwest district manager, and Ed Godsey of the firm's sales staff.

Dannen Mills now has 26 country stations.

PLANT OPENING—Livestock feeders in the York, Pa., region were guests June 25 of Hespenheide & Thompson, Inc., York feed manufacturer, to learn about the use of Morea liquid livestock feed supplement. The picture above shows some of the feeders grouped about the firm's delivery truck discussing the new development in feeding. Hespenheide & Thompson was appointed by U.S. Industrial Chemicals Co. as its first mixer-distributor of the liquid feed in the East. Dr. Harry J. Prebluda, manager of U.S.I. special products sales, and Philip Anderson, head of Feed Service Corp., Crete, Neb., owner of the patents covering Morea, were the principal speakers at the affair which was attended by more than 300 farmers. A picnic-style luncheon, featuring Morea-fed beef, and a pen containing steers fed on the supplement, were included in the demonstration. The feed company's mixing plant has sufficient capacity, it is believed, to serve a five-county area in the York region. Following short talks by Dr. Prebluda and Mr. Anderson, the speakers answered many questions from the farmers regarding the use of Morea.

MARKETS

(Continued from page 2)

good shape over most of the territory, but cattle and dairy feeds continue to move at a good rate for this time of year, and most suppliers are pleasantly surprised at this turn of events. The roughage shortage is still a serious problem, with supplies inadequate for present needs. Purchasing agents for feed manufacturers report inventories at a comfortable level, and purchases for forward shipments already have been made. Some feel that because of this situation and expected declines in poultry and livestock prices, feed demand will be slower in the weeks ahead.

Central States

July volume is not as good as June, but feed manufacturers in the central states say business is holding up pretty well, and the opinion is expressed that sales may hold at a record level right up to fall. Some firms with fiscal years ending in June have racked up a record tonnage for the period.

Running time for mills remains good, and the outlook is that the number of animals on feed will keep demand up. Prices are firm, and there is some apprehension that further advances might check volume. However, if returns to producers offer a favorable feeding ratio, feeding practices are expected to remain good.

Turkey feed volume is said to be slower than it should be at this time of year, but the poultry, egg, beef and pork markets remain satisfactory.

South Central

Formula feed business is holding at a very high level in this area, and daily shipments are running slightly ahead of the brisk pace of last week. A number of the mills have found it necessary to expand their overtime runs and many plan to continue to operate full shifts on Saturday.

An exceptional demand exists for hog feeds at a time when a summer letdown might reasonably be expected. The $24 or better hog market is providing a powerful incentive to hog raisers to continue the heavy use of formula feeds in their operations, and not many of them seem to be passing up the opportunity.

Sales of poultry feeds are holding up well. The effects of a late chick hatch are now showing up in the rapidly expanding need for pullet growing rations. Broiler feed requirements are up, too, and the mills that cater to this trade report an excellent volume from this source. A pickup in turkey feed business is also being noticed.

Ohio Valley

With wheat harvesting getting under way this week in the Ohio Valley, and with other midsummer farm activities now at their peak, some decline in sales of formula feeds was reported, although tonnage continues well ahead of that recorded during this period last year, despite recent stocking up by many farmers in anticipation of the present rush of farm activities.

The sales drop is expected to be only temporary and not serious. Practically all area mills were being operated this week on two shifts, following the long holiday last week.

While some observers have feared advancing ingredient prices will tend to slow down sales of formula feeds, there is no present indication that the price situation is proving a factor in view of the continuing strong market prices for all types of meats.

Although pastures continue excellent, sales of cattle feeds are currently well ahead of tonnages moved during recent summer periods. A strong market also is reported for broiler and baby chick feeds. Further increases in demand for turkey feeds are expected to develop toward the end of this month.

Pacific Northwest

Pacific Northwest feed ingredient prices followed mixed trends during the past week in the face of varying demand and supply conditions.

Advancing prices for soybean, linseed and copra meals and barley were more than offset by declines posted by millfeeds, milo, whole corn, cottonseed and fish meals.

Soybean meal listings gained $2 to $3 ton while California-produced linseed meal values gained $1 ton with barley listings gaining this same amount.

Fish meal quotes posted a sharp $7 ton drop with wheat millfeed tags down 50¢ ton and whole corn values off $1 to $1.50. Milo price tags declined $1.50 ton with cottonseed meal listings taking a $1 to $2 ton drop.

Alfalfa meal markets were unchanged with a fair demand for dehydrated kinds while suncured meal faced a slow call.

Formula feed sales were maintained throughout the area with volume turkey and broiler feeding continuing.

Fed steers last week sold mostly 25 to 50¢ lower at the North Portland livestock market with choice at $27.75@28.50 and good grades at $26.50@27.50.

Producer-paying prices continued their upward climb for eggs as the reflection of the previous week's wholesale market gains. AA large eggs led the climb with a 3¢ doz. boost with A large and AA small tags up 2¢ doz. at Portland while AA mediums gained 1¢.

Prices for live fryers held mostly unchanged at Portland with most sales around 23¢, f.o.b., to the grower, while one premium transaction was reported at the U.S. Department of Agriculture Marketing News Service at 26¢. The market appeared weak at the close because of lower outside market listings.

ADDS STORAGE SPACE

CANOVA, S.D.—A new 60,000-bu. annex to the Canova Farmers Elevator is going up here.

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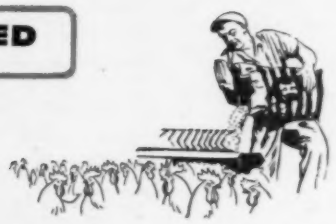

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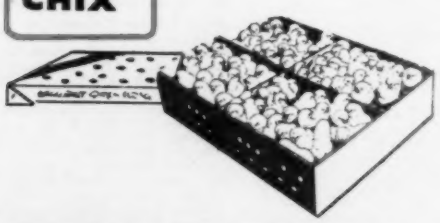

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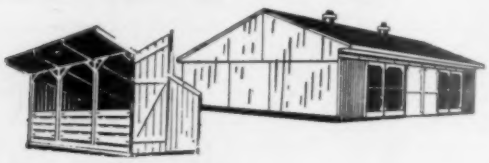

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